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Public Utilities

FORTNIGHTLY



June 13, 1929

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"No Broadcasting by Utilities"

BY SENATOR HUGO L. BLACK

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Regulation by Negotiation

PAGE 700

When Is a Rate "Reasonable?"

PAGE 712

The Changing Attitude Toward Public Utility Corporations

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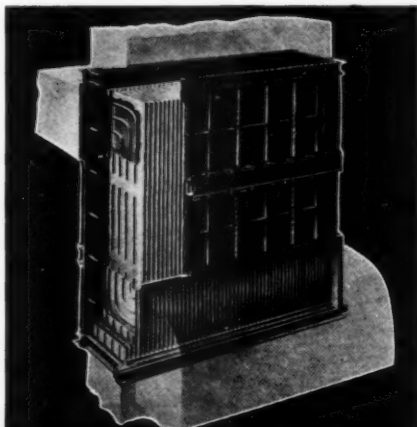
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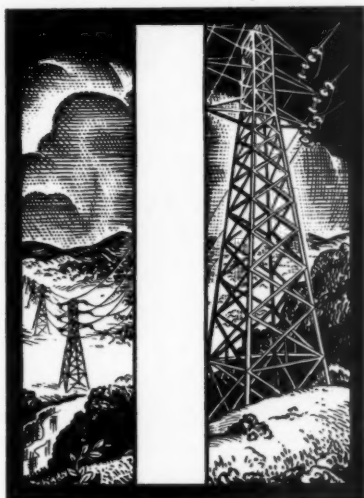


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Public Utilities Fortnightly



VOLUME III

June 13, 1929

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PUBLIC UTILITIES REPORTS, INC., PUBLISHERS

PUBLIC UTILITIES FORTNIGHTLY; a magazine dealing with the problems of utility regulation and allied topics, including the official decisions of the State Commissions and courts; endorsed by the National Associations of the Utility Industry and by the National Association of Railroad and Utilities Commissioners, and supported in part by those conducting public utility service, manufacturers, bankers, accountants and other users of the publication. Published every other Thursday; 75 cents a copy; \$15.00 a year; with bound volumes and Annual Digest, \$32.50 a year. Editorial and advertising office, Munsey Building, Washington, D. C., circulation office, Duffy-Powers Building, Rochester, N. Y. Entered as second-class matter April 29, 1915, at the Post Office at Rochester, N. Y., under the Act of March 3, 1879.

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The **HAND** which Turns the Wheels of Industry

MOTORMEN step to their controllers—a city's street car system swings into movement. A switch is thrown in a nearby dairy—milk is purified. A baker moves a small lever—great ovens bake our bread. Factory whistles blow. Hundreds of switches are thrown. Giant looms begin to weave; a myriad of machines fashion our automobiles; turn out our shoes; provide lumber for our homes and furniture.

That is Electricity at work—the hand which turns the wheels of industry. The muscles and nerves of that hand are the miles of line equipment erected to bring electrical service to the consumer. Often these lines pass through main arteries or thickly populated districts where a pole of artistic design would be greatly appreciated.

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*Complete details of the installations in these cities will be supplied upon request.

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Pages with the Editor

"THERE is always hope when people are forced to listen to both sides; it is when they attend only to one that errors harden into prejudices."

THUS wrote the philosopher, JOHN STUART MILL. While the expression is his own, the point of view is almost as old as civilized man.

MILL created merely the phrase—not the idea.

IN the realm of economics, where new and constantly-shifting conditions are projecting new factors into the problems that confront American business men, politicians and economists, the field for argument is so broad that the "both sides" to which philosopher MILL refers have themselves become subdivided.

THE liberals are contending with the radicals; the conservatives are arguing with the reactionaries.

AND the vehemence of their contentions is but a commentary on the importance and vitality of the subject that engages their attention.

ESPECIALLY on the importance of that phase of economics that touches upon the problems incidental to the regulation of our public utilities.

EACH group is charging the other with attempts to serve special interests.

CERTAIN politicians charge that the public utility corporations resort to unprincipled sheenanigans in their financial methods, and that they own or control not only the State Commissions, but also our institutions of learning, our daily press, our banks, our fraternal organizations and even our churches.

THE public utility companies, on the other hand, state that certain politicians are merely making political thunder for their own selfish interests, and, these corporations are placing their records at the disposal of the various boards of inquiry that are created to delve into and report upon their doings.

NEWSPAPERS and magazines which publish articles that are friendly disposed toward

the utilities are charged with corruption; either the publication is controlled by the "Power Trust" or at least the author is inspired by the Power Trust's Bribery Department.

ON the other hand, periodicals which publish articles that are friendly to those who attack the utilities are dismissed as merely seeking political favor by arousing class antagonism and inflaming the minds of the masses against the capitalistic system as a whole and against corporations in particular.

ALL printed matter—for or against utilities—is branded as "propaganda."

ANY printed word that is inspired by corrupt interests is prejudiced, and loses its influence as soon as the source of its inspiration is known.

A PERIODICAL that is pre-committed to an opinion or a policy, and is unwilling to modify either in the face of facts, is not destined to be a leader of public opinion.

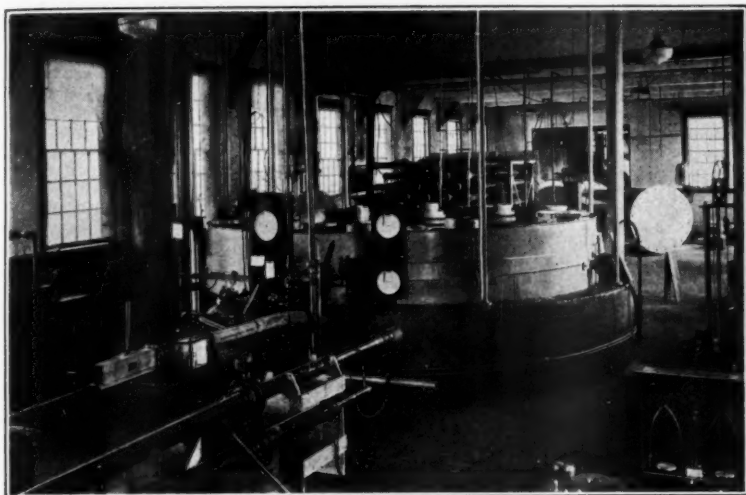
It is merely propagating errors that, (as MILL observes) will "harden into prejudices."

POLITICAL or economic policies that are built upon errors and prejudices are destined to failure. As THEODORE ROOSEVELT once said: "No question is settled until it is settled right."

THE editor of this magazine believes that the best way to settle such problems right is to seek the truth by dealing frankly with facts, and to discuss in the open the theories advanced by the foremost authorities on both sides of controversial subjects.

IF the facts are right (and if they are not right they cannot properly be classified as "facts"), the next step is to ascertain the soundness of the conclusions that are based upon them.

IN line with this policy, PUBLIC UTILITIES FORTNIGHTLY is publishing articles by leading advocates of both sides of controversial problems within the field of regulation—which is the special and specific editorial field occupied by this magazine. (Continued on page VIII)



Photograph of the 2200-foot prover and other equipment used in the Erie laboratory of American Meter Company.

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IN this very number, for example, SENATOR HUGO L. BLACK of Alabama, is given the opportunity of presenting his reasons for believing that public utility companies should neither own nor operate radio stations, and explaining the purposes of his proposed legislation to deny them such privileges.

IN the coming issue (for June 27th), HON. H. A. BELLOW, one of the best informed authorities in the country on the new and complicated regulatory problems that the radio art is presenting, analyzes Senator Black's bill, and gives his reasons for disagreeing with his distinguished opponent, both as to his facts and his conclusions.

THE editors believe that out of such open controversies facts may be ascertained, theories scrutinized and sound conclusions reached. All of which is to the public interest.

DURING the ensuing months many similar regulatory problems will be threshed out in the pages of this periodical—which thus serves not only as a medium of exchange of opinion, but as a source of authoritative information and as an open forum in which the editors serve merely as presiding officers.

WHILE the O'Fallon decision was handed down by the U. S. Supreme Court just as the late issue of this magazine was going to press, and consequently was received too late to be included in that number, the Editor took the occasion of preparing a special insert that commented on the importance of the decision and announced that it would be printed in the issue following—dated June 13th.

It will be found in this number that you are holding in your hands.

It may be observed, parenthetically, that PUBLIC UTILITIES FORTNIGHTLY is officially cited in this decision.

JUSTICE BRANDEIS, in a dissenting opinion, quotes (in footnote 52), from the article "Present Costs," by PROF. HARRY GUNNISON BROWN, of the University of Missouri, that appeared in our March 7th issue.

THE outstanding feature of the O'Fallon case is the ruling by the highest court that the Interstate Commerce Commission must consider present costs in valuing railroads under the mandate of Congress as set forth in the Transportation Act, 1920.

ALTHOUGH the Supreme Court reaffirms its former holdings in regard to present prices, the decision is not, as in many previous cases, based upon the question of confiscation, but upon compliance with the direc-

tion of Congress given to the Interstate Commerce Commission.

THE Court also expresses its opinion on the question whether a coal-carrying road nine miles long within one state is under the common control and management, as a single system, with another railroad twelve miles long in another state, where communication between the two properties is effected over the tracks of a terminal company, including a bridge across the Mississippi River.

THE question of the interest to be imposed upon excess earnings recaptured is also decided.

THE Court, after laying down certain rules for the execution of the orders of Congress relating to the valuation of railroads, leaves the application of these rules to the Interstate Commerce Commission. Just what weight is to be given to present prices will have to be dealt with in the first place by the Commission.

PUBLIC UTILITIES FORTNIGHTLY is extending its influence beyond American boundaries and assuming an international flavor.

DURING the past few weeks many subscriptions have come in from Canada.

AND scheduled for early publication are a number of contributions that treat of certain regulatory problems that are looming on the horizon as electrical power is becoming a commodity of international exchange.

POWER lines that convey current across the Canadian border are creating situations that are not dissimilar to the situations that are puzzling some of the government bodies in Europe.

THIS country has much to learn from as well as something to teach to foreign nations in the matter of regulating public utilities.

THE experience of certain European cities in operating its street railway companies has something more than a mere academic interest to American street railway companies, to American law makers and to American rate-payers.

IN a coming issue will be published an illuminating article on these live topics—beginning with the famous experience in municipal operation of the tramways (as the British term their railways) in Glasgow.

THE coming issue of PUBLIC UTILITIES FORTNIGHTLY will contain—in addition to the article by HON. H. A. BELLOW—an interesting study of "The Social Factor in Public Service Economics," by FRANCIS X. WELCH.

—THE EDITOR.



J U N E



*Reminders of
Coming Events*

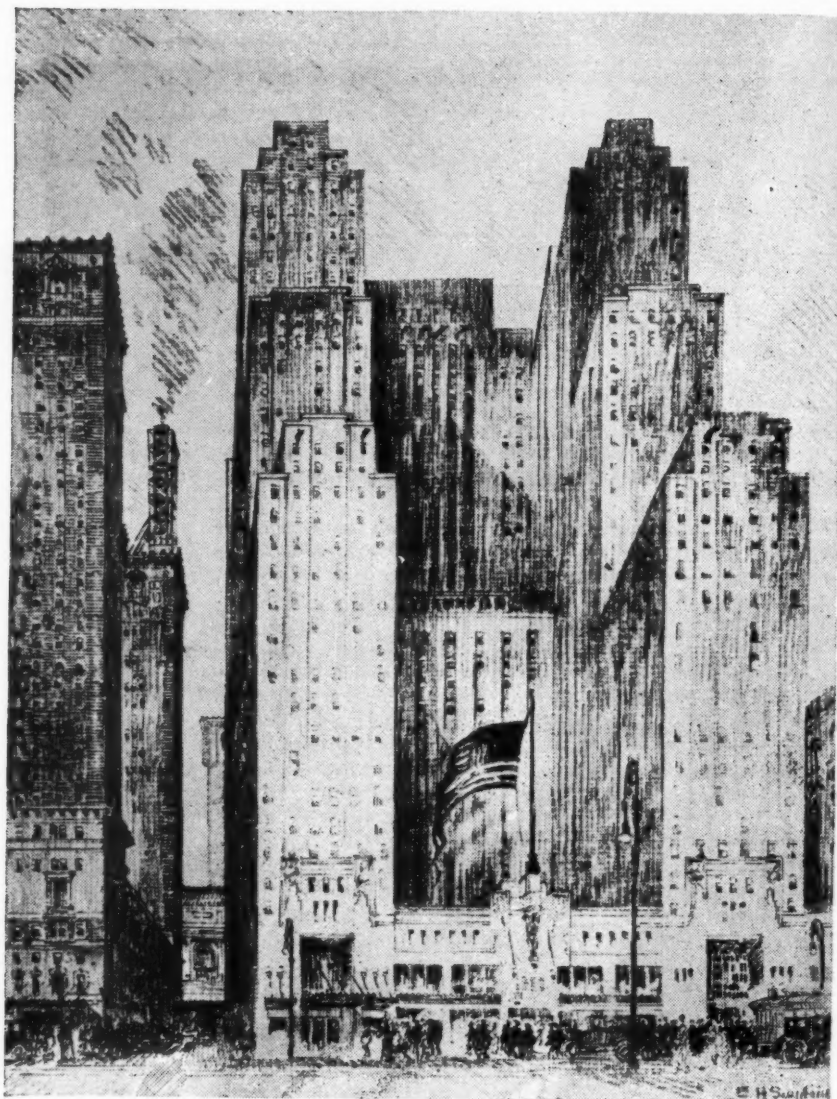
Utilities Almanac

*Notable Events
and Anniversaries*

13	Th	Mechanical propulsion of street cars began in Connecticut when HENRY BUSHNELL experimented with a compressed air motor in New Haven, 1878.	
14	F	Vestibule trains were installed by Pennsylvania Railroad, 1886. Noah's Ark started a controversy over public <i>vs.</i> private utility service, 2,300 B. C.	
15	Sa	The crack flier of the New York Central Lines, the "Twentieth Century Limited," made its initial run between New York and Chicago, 1902.	
16	S	The United States Railroad Labor Board announced salary decreases of \$60,000,000 a year, affecting more than 400,000 railway workers, 1922.	
17	M	Transportation was officially begun through the \$2,700,000 ship canal that connects the Hudson river with Long Island Sound, 1895.	
18	Tu	CHARLES FRANCIS ADAMS became president of the Union Pacific, 1885. The first telephone exchange in Oregon opened at Portland, 1878.	
19	W	The electric industry was given an impetus when an Italian scientist, LUIGI GALVANI, made frog legs twitch by touching them with metal, 1785.	
20	Th	Natural gas was first observed by THOMAS SHIRLEY in England, "where the water did burn like oyle," in 1659; he reported it in 1667.	
21	F	The "Williams Palace Car Co." was organized, with a capital of \$3,000,000, to compete with the Pullman and the Wagner companies, 1894. <i>Summer begins today.</i>	
22	Sa	The first steel rails were made for the Camden & Amboy Railroad (N. J.) by ROBERT L. STEVENS; they were 15 feet long; 1830.	
23	S	The first dining cars, (two converted from passenger coaches) were put into service by the Illinois Central between Chicago and Iowa Falls, Ia., 1897.	
24	M	<i>The 49th Convention of the American Water Works Association starts today at Toronto, Canada.</i>	
25	Tu	Announcement was made of the U. S. law, enacted the day before, requiring radio equipment and operators on passenger-carrying vessels, 1910.	
26	W	The first motor bus to be operated in the world was built by the Mack brothers, who ran a wagon shop in Brooklyn, N. Y., 1894	

"Today in America we are building a new civilization, not on the conquest of our fellow men, but on the conquest of nature."

—WALTER S. GIFFORD.



Drawing by E. H. Seydum

Courtesy New York Edition Co.

CITADELS OF SERVICE

No. 5: *In these towering battlements of peace, located at the very nerve center of New York's transportation facilities near Grand Central Terminal, are located the directing geniuses of several of America's most important public utility associations.*

Public Utilities

FORTNIGHTLY

VOL. III; No. 12



JUNE 13, 1929

The PUBLIC UTILITIES AND THE PUBLIC

IN this issue of PUBLIC UTILITIES FORTNIGHTLY we are publishing the full text of the opinions in the O'Fallon case recently decided by the Supreme Court of the United States. The decision was handed down just as our issue of May 30th was going to press; but an article on the decision was tipped in at the last moment.

In that article the significance of the decision was briefly discussed. The opinions of the justices, prevailing and dissenting, have been so thoroughly analyzed in newspapers and other publications that little more need be said about the decision by us. The Supreme Court could not have been expected to come to any other conclusion as the law stands. The only chance that the Interstate Commerce's valuation would be upheld lay in the possibility that the Supreme Court would reverse itself on a question upon which it has taken a consistent stand for more than a quarter of a

century. This the Court refused to do, administering a polite rebuke to the Interstate Commerce Commission for its argument on that question.

The position of the Supreme Court on the question of valuation for the purpose of recapture is simple and clear. It is, that Congress has directed the Commission to value railroad property for the purpose of recapture of income in the same way that the Commission must value railroad property for rate-making purposes. In valuing property for rate-making purposes, it must consider present prices or reproduction cost. This the majority of the Justices of the Supreme Court participating in the decision were convinced the Commission did not do.

The Commission apparently hoped that the Court would declare a different rule relating to valuation for purpose of recapture than it has adopted for rate-making purposes, or perhaps reverse itself on the whole question of

PUBLIC UTILITIES FORTNIGHTLY

value. That is undoubtedly the explanation of the argumentative opinion of the Commission to which the Court referred.

If Congress, in the face of the O'Fallon decision, should enact a law requiring that a different basis be adopted in estimating the return for recapture than prevails in estimating the return for rate-making purposes, the matter would undoubtedly come before the court as a constitutional question on the confiscation issue. The present decision is merely an interpretation of the statute under which the Commission acts, and a reassertion of the rule that reproduction cost must be taken into consideration in ascertaining present value.

The question of the right of the government to capture a portion of the O'Fallon's income remains undecided. It will be remembered that the lower court considered the value question immaterial because it held that even if the railroad's contention as to value were correct, the net earnings

less the amount to be paid to the government in recapture constituted an ample return. Whether this is so or not depends upon the way the return is calculated.

Is the return to which the railroads are entitled what remains of the income after deducting both the amount to be paid to the government in recapture and the amount to be placed in the "reserve" fund? Or is the return to be measured by what is left after deducting only the amount to be paid the government in recapture? The railroads assert that both of these items must be deducted. The government claims that only the amount claimed in recapture should be deducted. How these questions are answered will make considerable difference in the amount of the return.

The valuation question for recapture purposes is settled by the Supreme Court decision; but the recapture question, which partly depends upon what constitutes the return, remains open.



Jim Crow Busses For North Carolina

ANYONE who has taken a trip in the interurban railways from the city of Washington, D. C. into nearby Virginia to visit historic Mount Vernon, Arlington cemetery, or other points of interest in the Old Dominion state will probably recall the little ceremony that takes place just as the coaches cross the bridge that spans the Potomac and separates Virginia from the District of Columbia. Until the train crosses that line the negro passengers may sit where they please but as soon as it is reached,

there is a general exodus of the colored passengers into the "Jim Crow" section which is the special compartment set aside for the colored patrons.

North Carolina like Virginia and many other of the southern states has "Jim Crow" legislation. After the Fourteenth Amendment was added to the Federal Constitution guaranteeing equal rights to all citizens regardless of race, color, or previous condition of servitude, the Supreme Court of the United States sustained a Jim Crow law by holding that the word "equal"

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in the Constitution did not necessarily mean "identical" and therefore as long as the carriers afforded to the colored passengers facilities of equal rank, service, and comfort, the Constitution would not be offended if they were separate. Jim Crow laws usually provide, as a result, that carriers "provide equal but separate accommodations for white and colored passengers."

But a bus is not altogether the same as a train in this respect. It will be easily seen that motor carriers cannot just add on an extra coach or partition off a separate compartment for the negroes. They would either be compelled to operate separate "Colored Busses" or else make some mighty expensive alterations in their busses to provide for the colored traffic.

In North Carolina certain bus lines have solved the question or at least thought they had solved the question by refusing to carry colored passengers. This roused the ire of the Inter-Racial Commission which filed a petition with the Corporation Commission to compel bus operators of the

state to carry negro passengers. The Corporation Commission dismissed the petition and an appeal was taken to the superior court of the state.

Judge M. B. Barnhill of that tribunal ruled that passenger busses are common carriers and as such must provide "equal but separate accommodations for white and negro passengers," in North Carolina. The Corporation Commission has appealed to the supreme court from the decision. In his opinion Judge Barnhill said:

"The courts are for the protection of the humble as well as the great, to safeguard personal rights and property rights. One of the parties appealing to the court is always disappointed. Sometimes both parties are, but that cannot well be helped. Although not all judges are Solons, it will be a long time before we can get along without our courts."

Now we have Jim Crow trains, Jim Crow steamboats, and Jim Crow busses. We wonder how this is going to work out with the aeroplane. Perhaps the "crow" planes will be painted black.



Can the Federal Power Commission, in the Absence of a State Commission, Regulate Security Issues?

THE Federal Power Commission on February 28th, under the authority of the Federal Water Power Act, issued an order requiring licensees of water power sites to file notice with the Commission of his intention to issue securities in states that have no Public Service Commissions or other agency to regulate and control the amount or character of securities to be issued by licensees. This order applied not only to companies

developing power for interstate commerce but also to companies developing power to be used wholly within a state. The companies by this order were required to file notice with the Commission of intention to issue securities, together with certain information in regard to them. Licensees were forbidden to issue securities for a period of thirty days from the date of the filing of the notice, unless notified by the Commission in

PUBLIC UTILITIES FORTNIGHTLY

the meantime that it did not propose to exercise its jurisdiction to regulate the issuance of securities. If the Commission notified the licensee of its intention to exercise jurisdiction to regulate the securities, the licensee was forbidden to issue the securities or enter into contract or obligations for their issuance until the amount or character of the securities had been approved by the Commission.

On April 26th the Commission indefinitely suspended this order. The action was taken, the executive secretary of the Commission, Mr. O. C. Merrill explained orally, because the Commission "felt it was not equipped to undertake the regulation of secu-

rity issues, and that for the present day it had better devote its attention to other matters which are deemed of more importance."

There might be some question as to the power of the Commission to regulate securities of licensees engaged only in intrastate commerce. The states would have the right to regulate these securities. The fact that a state has not exercised its right to regulate might be taken to indicate that it did not desire the regulation of securities. Opinions as to the propriety of regulation of securities are not in accord. Not over half of the states regulate security issues of public utility companies.



A Vigilance Committee For Indiana Utilities

BANCROFT tells us in his brilliant history of the far Northwestern states about "vigilance committees." It seems that in the early pioneer days of some of these states, the lawless element was so much in the majority that by sheer force of numbers they dominated and exploited the new born western communities and in some instances actually voted themselves into authority as was the case with the famous Sheriff Plummer of Montana.

With thieves plundering under the very color of authority and villains attired in the very robes of the law, there was nothing else for honest men to do but band together for mutual protection and practice up on their sharp-shooting. These committees functioned simply because the law had been debauched but with the coming of authoritative government, they obediently dispersed as good citi-

zens should in the face of authority.

We didn't think that vigilance committees or anything like them were needed today, but apparently some of the good Hoosier citizens are skeptical of the ability of ordinary agencies of that state to protect the interest of the ratepayer from the applications of utility companies for rate increases.

According to the newspapers, Indiana has a very active new organization incorporated under the name of the "Indiana Vigilant Utility Corporation." This corporation was not formed to boost utilities as its name might indicate but to combat overvaluation of utility property in the interest of the ratepayers.

It has been rumored that efforts are being made by utility interests to get hold of the municipal plant at Peru. It is said that evidence was submitted

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to the grand jury at the Miami circuit court that utility men had "conferred with certain local persons relative to preliminary steps towards taking over the city lighting plant" and that before adjournment the grand jury recommended that the next grand jury proceed with the investigation.

We are unfamiliar with the laws of Indiana and did not know that it is a crime there to negotiate for the pur-

chase of a municipal utility plant. However, as Will Rogers might say, all we know about this is what we read in the newspapers.

The Indiana Vigilant Utility Corporation has announced inasmuch as it was organized in the interest of consumers of public utility service in the state, that it hoped to raise money for carrying on its work through a membership campaign.



Factors Making up Severance in the Condemnation of Utility Property

A HORSE's head isn't worth much after it is separated from its body and vice versa. The horse is a very clear example of a unit so inseparable and co-ordinate that severance damage is equal to the value of the whole beast. But inanimate property can be altered and substituted with varying degrees of severance liability. The severance damage in such cases is exactly coextensive with the value of impaired co-ordination as affecting the entire property.

Severance damage plays an important and sometimes a rather troublesome part in condemnation proceedings. For example, if an electric company cuts one acre from the rear of a hundred acre tract and it bears no extraordinary relation to the rest of the tract, the farmer should receive no more for that acre than one acre of ground would ordinarily be worth in that locality. But if the farmer's well were on that property and water was unavailable throughout the rest of the tract the 99 acres would suffer a financial depression all out of proportion to the value of the separated

acre of land needed by the utility.

The interesting part of severance damage as applied to utility condemnation cases is that the severance compensation is not made for the property taken but for injury to the property *not* taken. In the recent proceedings before the California Commission to determine a just figure for compensation to be paid by the city of Los Angeles to a private electric company for the latter's property and rights condemned by the city, the contention was made that since the filing of an application to ascertain just compensation placed the utility on notice, the private company had ample time to adjust itself to coming conditions before the actual taking of the property and that, therefore, no severance damages could be applicable when the final taking was consummated.

The Commission held that this position was unreasonable and made a substantial finding of severance damage to the property not taken. In addition to the cost of mending the actual physical severance, consid-

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eration was given to the cost of money, depreciation, and maintenance on the percentage of the generating and transmission system rendered temporarily and permanently idle, as

well as the diminution in intrinsic value of the entire property not taken for public service.

Re Los Angeles, Decision No. 20707, Application No. 10882.



The New 5-cent Fare Fight in New York City

FATHER Knickerbocker is not finished with his transit troubles. A new 5-cent fare fight looms in the offing. Now, that the Interborough controversy involving New York city's famous nickel ride on subways and elevated railways has subsided, temporarily at least, as a result of the United States Supreme Court decision throwing the case out of Federal Court, the city has drawn first blood in the fight of the surface lines for a 7-cent fare. In June 1928, nearly a year ago, the Dry Dock, East Broadway & Battery Railroad Company, one of the subsidiary surface car lines of the Third Avenue Railway Company, filed tariff sheets with the Transit Commission for a 7-cent fare. The latest decision of the Transit Commission rejects the 7-cent fare as illegal.

The decision is regarded as highly important because it has been assumed that the Dry Dock case is a test case on behalf of the surface car lines generally.

The utilities' counsel indicates that court action will be taken but doesn't say just what line of procedure the utility's offensive will undertake. Chairman William G. Fullen, writing the opinion for the Commission referred frequently to the Interborough Rapid Transit fare case, pointing out that the tactics of the utility in that

proceeding was similar to those adopted by the Dry Dock Company.

Chairman Fullen based his opinion principally on the position that the request for a "reasonable return" raised by the utility was immaterial inasmuch as the 5-cent fare was a "contractual obligation" resulting from a franchise originally granted by the legislature in 1860 and reaffirmed by subsequent sessions.

Commenting on the effect of such a contractual obligation upon the utility's right to a reasonable return, Chairman Fullen makes the following observation:

"A rate is not unjust and unreasonable merely because the carrier fails to make an adequate return. It is unjust and unreasonable only where it is a cause of the failure to make an adequate return. It is not enough to show simply that the business is not profitable. The burden is on the carrier to show also that this is due to the rate; and in my opinion the company has not sustained the burden."

It is interesting to note, however, that Chairman Fullen's decision is directed principally at what he terms the illegality of the tariff sheets as filed by the company. But he did indicate that another course might be open to the company by stating that the Dry Dock line should have proceeded under § 49 of the New York Public Service Law

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simply asking the Transit Commission to fix a reasonable rate. In the opinion, however, Chairman Fullen, declined to comment on whether or not the Commission actually had pow-

er to change the surface line rate if application had been made or should be made in the future under that section of the law for increased surface line fare.



Special Water Pressure for Fire Service not Permitted

UP to a short while ago it had been the practice of the Oconto Water Supply Company to maintain a pressure of about 30 to 35 pounds as indicated by the pressure gauge at the pumping station, and in case of fire, the pressure was raised to make it possible to throw the fire stream necessary at such times. Recently the patrons of the company complained that the pressure was insufficient to give good service, and it was contended on the part of the complainants that normal pressure should be approximately the same as that provided at times of fire. The solution of this situation is of some interest to all water companies.

The Wisconsin Commission directed an increase in the pressure for domestic service, stating in its opinion:

"It is not considered good practice to apply at certain intervals during the fires, a pressure greatly in excess of the normal, because the whole system must meet the shock of this abnormal pressure. If a reasonably high pressure is maintained continuously and the system made adequate to sustain this pressure without failure, it will then be possible to have the pressure when most needed. With the service, now furnished by this company, it is possible or quite probable that major leaks will develop under the increased pressure and the service will fail for adequate fire protection. We do not feel that this utility should be definitely required to maintain a normal pressure which approximates that necessary for fire protection, however, we are satisfied that pressure should be maintained at approximately 50 pounds per square inch."

Re Oconto Water Supply Co. U-3563.



Lost Equipment as Nonoperating Property in Utility Valuations

SOME time ago an accident happened at the plant of the Oconto City Water Supply Company at Oconto, Wisconsin. One of the major and expensive portions of a deep well pump dropped into one of the wells. Despite considerable effort of the company it could not be recovered. More recently the city of Oconto in exercising its right under the Wisconsin Indeterminate Permit Law started

proceedings to take over the company's plant. In the course of these proceedings it became necessary for the Wisconsin Commission to determine the value of the property in order to fix the amount of compensation due.

Three engineers were puzzled over what to do about the lost pump. Two of them excluded it entirely from their appraisal and the third finally

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compromised by listing it "nonoperating property."

The Wisconsin Commission did not pass directly on the question of whether the lost equipment was, or was not, nonoperating property. It was held that such a distinction was unnecessary under the state law. The Commission said:

"The statute relative to municipal acquisition contemplates, § 197.01 (4) that the property to be acquired is 'The property of any public utility actually used and useful for the convenience of the public operating under an indeterminate permit as provided herein.' We think that the nonoperating property, therefore, should clearly be excluded from the Commission's determination of value."

It seemed to be the opinion, therefore, that the validity of a classification of the pump as nonoperating property was immaterial since no finding of value was going to be made for nonoperating property anyhow. But there are different kinds of utility valuations. There is the valuation for purposes of condemnation or purchase, such as the Oconto case; and the more common rate-making valuation; and, also, the valuation for the purpose of issuing securities.

It is well-settled that abandoned, unused, or superseded property cannot be included in valuations for rate-making purposes, but a different rule than that applies where the question relates to the amount of securities that may be authorized. In such a situation whether or not the property in question has real value may become very important. The security issue valuations are usually more superficial and broader than rate-making valuations. In such a situation the Com-

mission acts as a sort of enforcer of the Blue Sky Laws to see that there is some real tangible basis for the issuance of securities.

For instance, it has been said by the New Hampshire Commission that the whole value of a building owned by a public utility may be included in the valuation for the purpose of issuing securities although a part of the building was not used for utility purposes. The Indiana Commission has a similar rule that the present value of property used for general offices of a utility should be included in the valuation for purposes of issuing securities, although such property could not be included in a valuation for rate making.

To go a step further, the Indiana Commission also ruled that certain property of an electric company although not used in rendering service might be considered in a valuation for the purposes of determining the reasonableness of a purchase price. And more directly in point is a rule by the California Commission that service mains of a water system, paralleled and to some extent duplicated by the mains of a city, should not be regarded as of reduced value in fixing the amount of compensation to be paid for purchase by the city.

So it appears that the ruling of the Wisconsin Commission to the effect that nonoperating property should not be considered in valuing utility property for purposes of determining a fair compensation price is not in entire accord with other authority. However, aside from the purely legal distinction, no one can question the right of the puzzled engineer to write up the lost pump as "nonoperating

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property," because when from our last information, it was still down with Davy Jones, the celebrated Mr.

McGinty, and other well-known denizens of the deep. It certainly was of no use to the utility.



Comparative Safety of One and Two-Men Car Operation

THE other day Michael O'Doolan dropped dead. He was a motorman for the New York State Railways and presided over the destinies of a one-man car that toured the environs of Rochester, New York. When he left home on the fatal morning he complained of not feeling well but took his place at the controller just the same.

Just about 10:30 on that morning as the car with six passengers was approaching, slightly down grade, North Clinton and Avenue D—a rather congested intersection for such an outlying district, O'Doolan suffered an acute heart attack. He died without having time to throw off his controller or set his brakes.

What happened? Did the car rush madly on down the grade against traffic signals and through vehicular traffic with six still living occupants too amazed to act and helpless to get out? Absolutely not. The power went off, the track was automatically sanded, the brakes were applied, the car came to an immediate stop and the doors balanced themselves mechanically. Why?—the "Dead Man's Control." The dead man's control is a safety device installed on all one-man cars of the New York State Railways Company and consists of an appliance so arranged that the pressure of the operator's hand must be applied to the controller at all times while the car is in motion. If this

pressure is released, all the automatic activity that attended the unfortunate death of the motorman is set into motion. This guards against fainting, dying, and every other physical catastrophe short of insanity that could happen to the operator while on duty.

The use of one-man cars has sometimes been opposed on the ground that they are unsafe. Early opposition to the operation of electric cars by only one man was manifested in Massachusetts and was recognized by the Commission. An order issued December 3, 1903, the Board of Railroad Commissioners said:

"It would be unwise, in our judgment, to establish a custom for trusting a car operated by electricity to the sole custody of one man and we must, therefore, recommend that the company employ conductors as well as a motorman on this route."

This precedent was followed in a later case in 1915.

The transition from the period where one-man car operation was considered unfavorably until the period where it was approved was manifested in the Bay State Rate case in which it was recognized that street cars operated by one man might probably be used to advantage in some instances. In this case, strange to say, the company had been criticised for not reducing operating expenses by using one-man cars. The Commission now agreed, however, that this

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danger might have been exaggerated and that in any event it had been minimized by recent improvement in the type of car and method of controls.

This change of attitude on the part of the Commission toward one-man car operation was explained in a Massachusetts case where it was recalled that in the earlier cases where one-man car operation was considered, cars very similar in type to the ordinary car would be used, using the front entrance only. In the latter cases, however, cars especially designed for one-man operation with safety devices of unusual character were to be operated.

One-man car operation now has a reported endorsement of the Commissions from Massachusetts, Rhode Island, New York, Illinois, New Jersey, New Hampshire, Utah, Wisconsin, District of Columbia, Oregon, Idaho, Connecticut, and Nevada.

Car patrons and citizens generally in some of our cities are still opposing one-man car operation even in outlying districts on grounds of public safety. The fact of the matter is that the new safety cars used for one-man operation are even safer than cars operated by a double crew. What, for instance, could a conductor have done on Michael O'Doolan's car? We can easily suppose that, by the time a conductor could have rushed up to the controller to shut it off, even assuming that he was a man of unusual presence of mind and could take such immediate action under such circumstances, the car might have plowed through two or three automobiles, or if the automobiles happened to get out of the way, it might have picked up

sufficient speed to have caused a very serious accident.

Street railway companies in all places where one-man cars are permitted usually claim that one-man cars actually have less accidents than two-men cars, but if we are skeptical of the companies' figures, here is a clear cut case taken from Public Utility Service and Discrimination, by Ellsworth Nichols.

In one city in Wisconsin on a certain line cars which had been built for either one-man or two-men operation were operated for a certain period by two men and then changed and were operated by only one man. The accident record for the last four months of 1922 (under two-men operations) compared with those for the same months of 1923 (under one-man operation) showed, according to the detailed tables in Mr. Nichol's book, 14.63 persons injured per million in 1922 as compared with 5.75 persons per million injured in 1923. In 1921—two-men cars on another line had 2.65 accidents per 10,000 car miles; one-man cars on the same lines had 1.81 accidents in 1922 and 1.64 accidents in 1923 per 10,000 car miles.

But it appears that some citizens in some communities are still skeptical. On the very day that motorman O'Doolan died we received a report of a case in Pennsylvania in which the city of McKeesport complained against the installation of such cars by the Pittsburgh Railways Company because of the possibility of the operator of a one-man car suddenly fainting or dying while the car is on a street grade and falling with his weight on the one-man handle, thereby

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preventing its release and the setting of the emergency brakes by the dead man's control. "Such an occurrence is a possibility but an extremely remote probability," said the Pennsylvania Commission.

As a matter of fact, although the dead man's control on one-man cars has been installed for many years on the system of the New York State Railways involving such important communities as Rochester, Syracuse, Utica, and Schenectady, the death of motorman O'Doolan was the first time in the history of the company that there was any occasion for its use. There is a remote probability that the death of an operator would be of such an unusual character as to cause him to "freeze" to the controller. Even if it did occur, what could a conductor

do about it? Now long would it take him to notice the situation and then break the death grip on the control? The Pennsylvania Commission said in the last named case:

"The purpose of installing the one-man type of car is to reduce operating expenses and meet the competition which respondent company has had to confront from privately owned automobiles and other types of transportation. With this managerial policy, the Commission should not interfere unless it increases the danger to the public. The Commission is of opinion that it is its duty to insist that street railway operation be made reasonably safe for passengers and the general public, but that it cannot require that such operation be such as to insure against every possibility, no matter how remote."

McKeesport v. Pittsburgh R. Co. Complaint Docket No. 7888.



Competitive Operation between Rail and Bus Carriers in Nevada

A RATHER important decision has just been handed down by the Nevada Commission denying to the Pickwick Stages an interstate bus company operating through that state authority to engage in local business. Commissioner Martin in rendering the majority opinion pointed out that uninterrupted train service was essential to the continued prosperity of the state and everybody in it.

One of the more interesting points discussed by Commissioner Martin was the effect that reduced train service resulting from bus competition would have on the employment situation. He further stated:

"On the other hand the applicant for this franchise does not show in the record that they own or that they

contemplate investing any of their capital in permanent improvements or property. All of their facilities for operating are on wheels and can be moved from within our confines within a few hours. Their headquarters for operating are all in rented property. . . . From this we cannot help but conclude that they are not community builders and that they will not contribute to the general welfare of the public in proportion to the benefits that will accrue to them if granted this certificate."

The dissenting opinion with its proposed order and opinion is very exhaustive in its discussion of the facts in the case. Chairman Shaughnessy was of the opinion that the bus rates proposed would greatly benefit citizens of modest means.



*Drawing by
Abell Sturges*

"There is but one protection against the tyranny of any class; and that is to give that class very little power."

THE laws of a democracy are usually the result of the popular will. Public sentiment crystallizes in statutes. Opinion is moulded and shaped by information. Belief of today may be supplanted by the thought of tomorrow. Discoveries, theories, true or false, produce varying opinions.

Facts or imagined facts, cause formation of opinions, and these opinions

"NO BROAD-

Why I Believe that
by Law from

By

HUGO L. BLACK
UNITED STATES SENATOR
FROM ALABAMA

in turn induce action. This is true of an individual. It is also true of a collection of individuals, or the public.

Control of the sources of public information, is, therefore, the most powerful factor, in shaping public opinion, and in directing public action.

No one class, or group, should be given this tremendous power. It has always been dangerous to complete liberty of action. It is dangerous today. The class or group which has such power can exercise tyranny, whatever may be the form of government.

THOMAS Jefferson, the great exponent of human rights, said that if he must choose between a country without laws or a country without newspapers, he would prefer the former. This was the great estimate he placed upon the dissemination of information. While this statement may not obtain the ready assent of

CASTING BY UTILITIES"

Public Service Corporations Should Be Stopped Owning or Operating Radio Stations

¶ More plans than ever before are afoot in the Nation's Capital to place public utility enterprises under more rigid regulation and especially to curtail (in some cases to eliminate entirely), their means of access to the public, including not only the press of this country and the radio but even the United States mails. One of the more conservative of these plans is here commented upon by its sponsor—at whose request this article is published exactly as submitted.

¶ In the next issue of this magazine HON. H. A. BELLOW, formerly of the Federal Radio Commission, will point out some of the practical considerations of Senator Black's bill, and express some views that are at variance with those here put forward.

—EDITOR.

all, mature reflection of political philosophers has always led to the conclusion that freedom and uncensored discussion of public men and events, are inseparably united. Despot, modern and ancient, have endeavored to fix their arbitrary powers, by striking first at the right of their subjects to free assemblies and free speech. Italy is today denied these privileges, priceless in the cause of liberty. That man who aspires to rule a people with his own untrammelled will, does well to shackle the mind, still the pen, and paralyze the tongue of those whom he would enslave. When Louis the Fourteenth looked about him to ascertain what causes were still working against the perpetuation of the despotism he had more firmly established in France, he discovered there were some writers who dared to question his divine right to enslave mankind. Those he could not bribe, to support his regime, he straightway placed in the Bastile.

Arbitrary and unjust power cannot thrive and prosper, in the face of hostile public opinion. Arbitrary and

unjust power, on the contrary, can never be dethroned, until the intellect of the average man has been sufficiently enlightened by impartial facts, to reveal to his mind, truth as it is. How all important, therefore, it is in a government for and by all the people, that the springs and channels of useful public information be unpoisoned and unpolluted by mercenary partisanship!

It is unthinkable, in a republic, that government should foster or permit, a system for private or group exploitation of public information.

THE possibilities of radio cannot be foretold today. Experts disagree concerning practically every phase of the art. We are probably in the very infancy of its amazing discoveries and developments. It has already given promise of driving away from the isolated rural homes, the tedium of loneliness. It has filled the city apartments of many with music and information. It has given millions contact with the rapid progress of modern civilization, who could not otherwise have seen beyond the

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narrow sphere of their own community. Farmers of the West and South have been enabled to receive the daily reports of prices and market conditions. Instructors in schools and colleges have been enabled to carry their messages to countless thousands, in whose face it seemed the door of knowledge had been shut. The people have been able to sit a thousand miles away from a candidate for the highest office within their gift, and listen to an exposition of his principles and ideals. Every day, the improvements of this rapidly growing art increase its potential usefulness, and add to the sum total of its potential pleasures.

A republic can live only so long as its people are morally and intellectually sound. Loyalty to governmental ideals and principles must be based upon character and knowledge. A realization of this fact has caused our people to establish a system of public schools and colleges, second to none in all the world. The people have gladly paid into the public treasury, their money, for this purpose. There are today in America, more papers and magazines, good, bad, and indifferent, than ever before in any nation on earth.

There are now few, who acknowledge themselves to be possessed of such reactionary minds, that they oppose the unlimited spread of knowledge among the people.

THE possible field for newspapers, is restricted only by public demand. The number of radio channels, with present-day information, is within very narrow bounds. Both are useful channels of public information and knowledge.

While there is a very widespread belief that many newspapers are over-influenced by numerous interests of wealth and power, still none claim that all these great intellectual weapons are so controlled. If it were possible for one group of specialized commercial interests to monopolize overnight, all newspapers and magazines, for exploitation of their business, our country would be in jeopardy. Go a step further, and assume that such concentrated control was not only possible, but had actually taken place. Does any one believe for one minute that the freedom loving people of this Nation would permit it?

Radio perhaps today, reaches as many people as newspapers, and it is only a short time until almost every home will be supplied from some broadcasting station. Today, we are told that our present radio knowledge will permit us to use only about sixty "trunk lines" or "cleared channels."

A well informed radio expert, officially connected with the administration of the present law, said:

"Today we have few trunk lines of radio. It is possible for a few great corporations to control the situation. Fifteen or twenty big stations could practically monopolize the air in this country. As you increase the power of stations up to twenty-five and fifty thousand kilowatts, you must clear more channels, and as you clear more channels, you must do either one of two things, *i.e.*, first cut down the number of regional stations involved, or squeeze the regional stations together from the other regional stations left, resulting, of course, in more interference."

IF it be true that "fifteen or twenty big stations could practically mo-

70TH CONGRESS
2D SESSION

S. 4937

IN THE SENATE OF THE UNITED STATES

FEBRUARY 4, 1929

Referred to the Committee on Interstate Commerce and ordered to be printed

AMENDMENT

Intended to be proposed by Mr. BLACK to the bill (S. 4937) continuing the powers and authority of the Federal Radio Commission under the Radio Act of 1927, and for other purposes, viz: Insert the following:

- 1 SEC. 5. No permit for the operation of a radio station
2 shall be granted to any public utility corporation or to an
3 individual operating a public utility corporation, or to any
4 corporation in which the stock is owned in whole or in part
5 by a public utility corporation or the officers thereof, or to
6 a corporation which is affiliated with a public utility cor-
7 poration. If any permits have been previously issued to
8 such corporation or individuals, they shall not be hereafter
9 extended, but they shall be revoked.

Of the 615 broadcasting stations in the United States, those that are owned wholly or in part by public utility companies would be denied permits by this proposed bill of Senator Black

nopolize the air in this country," it is certainty time for us to "stop, look and listen," unless we believe such a situation desirable. As for myself, I believe a monopoly on supplying public information the most dangerous that can be imagined.

All thinking people admit that the kind of information that goes into the average mind, determines the opinions of that mind, and thus directs the action and the vote. If over one hundred and twenty millions of people are to have their knowledge mainly

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dispensed to them from one "radio" source, would this not necessarily require a censorship, and is not "censorship" distasteful to the American mind?

Seven of the "cleared channels" or "trunk lines" in radio are today controlled by the Radio Corporation of America.

This company is largely owned by the General Electric Company and the Westinghouse Electric and Manufacturing Company. The company that operates the station today determines what information or amusement goes to the listener. This company is not satisfied with its present radio permits. It has sought more and more. It may be no just ground of criticism, that they seek more spheres for their radio activity. By the same token, however, it surely cannot be just cause for criticism of those who oppose a concentration of this great governmental asset in the hands of a small group.

OBJECTIONS to monopolistic control of radio by public utility companies are greatly strengthened by a consideration of the fact that the operation of a broadcasting station is subsidiary to the main object.

It is interesting to note in this connection that in the application for license filed with the Radio Commission, for station W.E.N.R., owned and operated by the Insull interests, it was stated that these interests desire "to establish good will as between our utilities and the public."

There is no ground for just criticism of Mr. Insull for wishing to establish good will between his interests and the public. Is it just, however, that the people should have their

right in the air diverted to this corporate use? These interests frankly admit their desire to use the privilege of broadcasting *in the interest of their main business*, to wit: the operation of public utilities. Their petition was granted, and the station is operating with a maximum potential capacity of 50,000 watts.

If this company has a right to use radio for furtherance of its own financial advantage, why have not others? How far would these privileges go when thus distributed?

THIS government has been very prodigal in the past with its natural assets. Public lands have been bestowed with lavish hands upon the just and the unjust. Public minerals have been generously donated to governmental favorites. Vast water power sites, eternal as the ages, have been squandered.

Can it be true, that this miracle of our century, which can add to the health, comfort, amusement, useful knowledge, and commercial advantages of a whole people, shall be added to the assets of public utility companies for establishing good will between them and the public?

Is this marvelous discovery a gift to the people as a whole or to the public utility companies? If to the companies, then is it well that further privileges be extended to them for their private gain?

If radio is for the people, and permits are to be granted to private individuals and corporations, why not to individuals and corporations *engaged in the broadcasting business*?

With the limited channels for broadcasting, I take the position that

Permits to Broadcast Should Be Granted Only to Those Exclusively in the Broadcasting Business.

"If radio is for the people, and permits are to be granted to private individuals and corporations, why not to individuals and corporations engaged in the broadcasting business?"

permits should be granted only to those whose business it is to *serve the public directly by radio, not indirectly by street cars and electric lights.*

If not to public utilities, to whom should radio broadcasting privileges be granted? That is a serious question, and one which has not yet been answered with complete satisfaction.

IN my own state, Alabama, the three great institutions of learning have united to give to the people programs supplying both entertainment and useful information. This might be the best method of solving the problem for all states. There is at present much just complaint by reason of the commercialization of many stations. There are many people who say, that the small stations should be removed from the air, forgetting that local communities have their rights to their own programs and their own district news.

Radio problems are so changing that it is not possible to determine today the exact administrative methods which will be satisfactory tomorrow. There are certain fundamental principles, however, that will not change. My opinion is that it would be fundamentally wrong and unsound to permit any group, faction, or clique, to obtain control over radio in whole, or in part.

Radio communication should be

fair, nonpartisan, nonsectarian, and in its operation disconnected with other lines of business or endeavor. By this, I do not mean that partisan or sectarian comments should be barred from the air. It should be equally open, to all sides, and not under the control of either.

I offered in the Senate an amendment to the law prohibiting the granting of further permits to public utility corporations, without application to other groups, because as yet, no evidence has been called to my attention, showing that other groups desire such control. In addition, I had in mind, recent disclosures made by the Federal Trade Commission concerning propaganda methods by power companies. I take it, that there are few thinking American citizens, whatever might be their financial or social standing, who have not viewed with alarm, the methods for propaganda disclosed. It is my judgment that no more insidious attack can be made upon Democratic institutions, than a secret attempt to direct the course of thought of the school children of our nation. Secret employment of college professors to secretly disseminate partisan knowledge, cannot be honestly defended by any man who loves a government of the people. Every individual, group of individuals, corporation or group of corporations,

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have a right in this country to present any side of any controversy. Whenever the time comes, however, that our schools and colleges are prostituted to the point that they become partisan institutions for private gain, then our system of government is in jeopardy.

Of course, it is mere truism to assert that if any group can control information, it controls public opinion, and thus manages government affairs. It is my belief that any group that endeavors by secret methods to control public information, is unfriendly to the tradition of our free institutions. These amazing disclosures—the employment of college professors, the manipulations designed to revise school textbooks—are sufficient to cause a cautious person to want the newest channel for public information to remain in other hands.

THE problems of radio are many. Mr. Hoover summed them up in the following words:

"A very large problem that is going to arise is the problem of contest between cities, states and individuals; contests between different public journals and between educational institutions and private concerns, as to who shall enjoy this privilege."

WHO is to control channels of air communication? Who shall have the privilege of reaching through the human voice at one time the forty million men, women and children, who daily *tune in* at their homes? Shall we consider the listener or the sender? Shall the rights of our Nation to utilize this great opportunity for improving the minds of our people be disregarded?

There are millions who believe that

this is one source of information that should not be dedicated to advance the financial interests and swell the profits of any business enterprise. There are also millions who believe that if profits are to be made from this channel of communication, it should be wholly and completely under the control and regulation of the government.

Since the beginning of this government, monopolies have been proscribed and feared. Every tyrant of all time has continued his power, by telling the people what they could and could not think, and what they could and could not say. The day may come, when the major portion of current information will be transmitted by radio.

Shall it then be controlled by a monopoly, doling out what shall and what shall not be received by the people?

RADIO should not be seized by the propaganda experts, to direct the attention and thought of the people along partisan lines of public policy. Let us keep our schools and radio free from political alignments and mercenary exploitations. That these two great instrumentalities of advancing thought and knowledge may continue to be used for the benefit of the people, is the hope of the friends of democracy.

The air is the last great division of nature to become subject to the usefulness and comfort of man. It does not now belong to any group or faction or clique.

If the representatives of the American people do their duty, the air will be free, and the grasping clutches of monopoly will reach in vain for it.

Regulation by Negotiation

The Effect Upon Rates of Informal Agreements Between Utility Companies and the Commission

WHILE the following article by former Chairman Childress discusses the results of a regulatory policy adopted by the Public Utilities Commission of the District it is of general interest to the utilities and the public of all of the states.

It is to a large extent typical of the present trend of regulation which is resulting in rate reductions at the minimum of expense and delay where rate reductions are possible. Litigation, like strikes, is expensive to all parties involved—including the public. There is an increasing tendency toward compromise.

The unfriendly attitude of the public towards transportation utilities as compared with the friendly attitude toward other utilities in the District of Columbia also appears to be typical. As to who is to blame for this, opinions will differ. It is a condition which should not continue because transportation is vital to all other business as well as to social activities.

Mr. Childress' article indicates the importance of the work for the public which is constantly being done by the state regulatory Commissions.

—THE EDITOR.

By JOHN W. CHILDRESS

FORMER CHAIRMAN, PUBLIC UTILITIES COMMISSION
OF THE DISTRICT OF COLUMBIA

WHEN Congress established the Public Utilities Commission in Washington, D. C. in 1913, the Board of District of Columbia Commissioners were given the duties and responsibilities of that work. It was in March, 1927, that the new Public Utilities Commission began to function.

The present Commission consists of two civilians appointed by the President of the United States and confirmed by the Senate, together with the Engineer Commissioner of the Board of Commissioners, D. C.

The only electric company in the city is the Potomac Electric Power Company.

THE first duty of the Public Utilities Commission was to make a valuation of the property of all local utilities, and the order concerning the fair valuation of the Potomac Electric Power Company was entered in May 1917. Previous to that time the rate had been 10 cents per kilowatt hour, and this rate remained in force until August 1, 1917, when the Commission ordered the rate reduced to 8 cents, based upon the valuation as found by it.

The company objected to both the valuation and reduction in rate and took an appeal to the Court in Equity and asked that the decision of the Commission be set aside. Pending

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the final determination of the case in the Court of Appeals that Court sustained the injunction sought by the company on the condition that the company could bill its customers at the 10-cent rate but impound the difference of 2 cents between that and the rate ordered by the Commission.

In September 1920 the Commission, after a hearing, ordered that the rate should be $8\frac{1}{2}$ cents, and in July 1921 it ordered a further reduction in certain schedules and again in 1922, all of these orders were carried to court, and the restraining orders were modified by the court to include these later orders of the Commission.

In 1924 the cases were still pending and there being no immediate prospect of a final determination, the Commission began negotiations with representatives of the company with the idea of reaching an agreement of settlement of the valuation dispute. These negotiations were successful, and in December 1924 the court entered a decree embodying this compromise agreement.

THE principal items of this compromise were that the valuation was fixed at \$32,500,000, one-half of the impounded fund was to be returned to the consumers and future rates should be based on a $7\frac{1}{2}$ per cent return on this agreed valuation, plus later net additions. While the litigation was in process the impounded fund from August 1917 to December 31, 1924, after adding interest and making a deduction for taxes, amounted to about \$5,800,000, so that one-half of this large sum was repaid *pro rata* to those ratepayers who had contributed thereto through the

monthly payments they had made during the impounding period.

The decree further provided that if hereafter the rates yield more than $7\frac{1}{2}$ per cent on the fair value during the period of any one year, one-half of the excess should be applied to a reduction in rates to be charged the public, thereby providing a sliding scale of rates. (Provisions were also made for a decrease, but this has been found to be unnecessary for consideration.)

The benefits accruing to the consumers as a result of this decree were immediate since they not only received as quickly as possible their *pro rata* share of the refunds, but beginning on January 1, 1925 an immediate reduction of 25 per cent in the billing rate; that is, from the rate of 10 cents in effect prior to January 1st, to a $7\frac{1}{2}$ -cent rate effective on that date.

THE response to and appreciation of the consumer to this reduction was instantaneous. During the period from 1916 to 1920 there were great increases in the sale of current due to the war and post war activities in the city of Washington. These increases amounted to more than 20 per cent in 1918. By 1921 the increase had fallen to a little over 9 per cent and remained around that percentage for the three years following, reflecting only the natural and normal growth of the city.

In 1925 the increase in sale of current over the year 1924 amounted to nearly 18 per cent of which approximately half may be safely estimated as being entirely due to the reduction in rates. As the result of this tremendous increase for the year and for

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the succeeding years, the company has been enabled to earn far in excess of the agreed $7\frac{1}{2}$ per cent return, and the consumers have likewise each year profited by the application of the sliding scale of rates.

The earnings of the company in excess of a $7\frac{1}{2}$ per cent return, the amount applicable to the reduction in rates, and the rates for the years 1925 to 1929 inclusive are set out in the table following:

	<i>Excess earned by company</i>	<i>Applicable to rate reductions</i>	<i>Base Rate</i>
1925	\$ 704,328	7.5¢
1926	861,658	\$352,164	7.0¢
1927	675,790	430,829	6.25¢
1928	1,250,124	337,895	5.9¢
1929	625,062	5.2¢

This growth is all the more remarkable when it is remembered that Washington is almost wholly a residential city, there being but few manufacturing plants, the company having only about 130 large users of power. Although a part of the increase in consumption can be attributed to the expansion of the street lighting system, it is principally due to the more generous use of electricity in the homes, the stores, apartment houses, and the general use of appliances.

To meet the continued enormous demand for electricity the company has kept pace with the expansion of its plant. In 1914 at its Bennings plant it had five turbo generators of a total capacity of 37,000 kilowatts. During the succeeding five years the capacity had been increased to 77,000 kilowatts and from the year 1920 to the close of the year 1928 the capacity had grown to 148,000 kilowatts. A further extension of 30,000 kilowatts is now under construction. The com-

pany's cost of production at its Bennings plant, including labor, fuel, repairs of power plant, averaged 3.68 mills during the period of 1914 to 1917 inclusive, increased to 7.84 mills in 1920, and has since been gradually receding, falling to 3.85 mills in 1928, the lowest since the year 1916—this, too, in spite of the fact that during the period prior to the war the cost of coal was about \$3.50 per ton, while in 1928 it was approximately \$5.

The economies, therefore, in production, the reduction in losses, the attractive rate, plus the co-operation of the public have produced one of the most interesting chapters in the history of public utility regulation.

JUST when the increased earnings of the Potomac Electric Power Company will be offset by the decrease in rate from the yearly reductions, and the rates become practically stationary, no one would care to prophesy, but it is freely predicted that the figures reported thus far in 1929 indicate another large increase over the $7\frac{1}{2}$ per cent return, despite the fact that the rate base has now grown to more than \$44,000,000. This means that the rate will likely fall to 5 cents or below for 1930.

I am confident that the sensible move inaugurated by the Commission which reached its termination through the broad-minded acquiescence and co-operation of the representatives of the power company has brought about many benefits to the ratepayer other than the nearly 100 per cent reduction in rate. It is a fact that since I have been connected with this Commission there has been no public agitation against the company by the news-

One Example of the Mutual Benefits of Informal Adjustments of Rate Problems

"I am confident that the sensible move inaugurated by the Commission, which reached its termination through the broad-minded acquiescence and co-operation of the representatives of the power company, has brought about many benefits to the ratepayer other than the nearly 100 per cent reduction in rate. . . . There has been no public agitation against the company by the newspapers or the civic organizations; on the contrary there seems to have been built up a substantial volume of good will and friendliness."

—CHAIRMAN CHILDRESS

papers or the civic organizations; on the contrary there seems to have been built up a substantial volume of good will and friendliness. This is all the more apparent because certain other of the local utilities (particularly the transit lines), have come in for a rather large share of adverse criticism and active opposition, and are constantly the target of editorials and oratory. Just how much of this is due to fear of an increase in rates, and how much the agitation against the companies and the Commission is intended as threats to prevent any changes is difficult to estimate; but the criticism is not directed against the light and power company, and has not been since the compromise began to show results.

Even the 7½ per cent return on valuation is not criticized although less than 5 per cent now earned by the traction lines is looked upon in many quarters as excessive.

How about other negotiations and agreements that do not bear upon electric rates?

The first important action of this Commission was the hearing on valuation of the Chesapeake & Potomac Telephone Company, a subsidiary of the American Telephone & Telegraph Company. The work of experts had gone on for many months and hearings were just beginning and likely to continue over several weeks. On the third day, during the noon recess, the president of the company suggested to me the possibility of settlement by compromise. Adjournment was taken immediately and through conferences lasting only a day or two it was agreed that the company would waive the matter of new valuation and would put into immediate effect a rate reduction which had been ordered by the Commission two years before, and which had been held up by injunction. In addition, the new rate would be dated back to the time of the former order, and the next bill of each customer would be credited with the reduction allowed.

Thus was settled easily, simply, and amicably a case long pending, with the consequent saving of time and ex-

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pense, and the absence of the disputes and ill will which nearly always follow the differences in opinions and testimony in such cases.

A YEAR ago the Commission held hearings over a period of two weeks to pass upon a Unification Agreement of the two traction lines and the motor bus company, but decided there were a number of items in that agreement of which it could not approve. We then held informal conferences with the attorneys and representatives of the company, participated in by the people's counsel of the Commission, and ten changes were suggested which it was thought would adequately protect the interests of the public. As a result of these conferences and agreement entirely satisfactory to the Commission and the companies was reached, and which now awaits only the ratification of Congress to become effective. This agreement has been approved by the responsible local organization such as the Board of Trade and the Chamber

of Commerce, as well as the majority in both the Senate and House District of Columbia Committees, but has had the very active and at times vituperative opposition of certain partisan papers and individuals looking only to their personal publicity and not to the immediate and ultimate good of the city, nor to what the large majority of the more than half million people of the District desire.

IT seems to me that the attitude of understanding and compromise which has been the policy of this Commission all along has brought about a better feeling and an actual saving of money to the people of the District of Columbia in the power company case and the telephone case, and bids fair to accomplish the same in the near future where the transit lines are concerned. Of course, there are numerous instances of compromise and adjustments of complaints and criticism which are almost daily taken care of in an informal manner.

An Order of the Commission May Not Be Collaterally Attacked in Court

THE supreme court of Alabama has ruled that an order of the Public Service Commission, declaring a certain individual to be a motor carrier and ordering him to desist until duly authorized by the Commission, had all the force and effect of a judgment of a court of law; therefore, it could not be collaterally attacked by the individual in criminal proceedings brought by the state to punish him for violating the law in operating without Commission authority. Judge Sayre pointed out that the proper remedy for the individual in such an instance would be to appeal directly from the Commission's order, but having waited until he was brought up in criminal court, the decision of the Commission on his utility status was conclusive.



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MUNSEY BUILDING ÷ WASHINGTON, D. C.

June 13, 1929.

Dear Sir:

An Irish woman, when asked why she liked her little rooms and the hard sidewalks of the big city better than larger quarters she could have in the country, where there is plenty of grass, where flowers bloom in profusion, and where trees, shrubs, and vegetables grow, replied:

"Folks is more interesting than stumps."

Yes, folks are more interesting than stumps, more interesting than anything else to most of us. It's a fact worth considering. Suppose we do a little preaching.

PERSONIFICATION OF BUSINESS. As business was carried on in the old days customers understood they were dealing with folks. The owners of businesses, whether individuals or partners, had a personality.

When corporations came, stumps were largely substituted for folks—at least in the public mind. Personality was sunk in the colorless organization known to the law as a fictitious corporate person and to the public as a being without a soul.

A few corporations have acquired something of an individuality, but no corporation can ever inspire the same interest as that which attaches to a living person who has personality.

The corporation's business, however, is really conducted by folks, just as was business in the days before corporations came. It is the men in the corporations who

do the work. The corporation is composed of flesh and blood. It has plenty of personality, but personality is often submerged in the organization.

Dealing with the corporation is often something like playing a game of chess or checkers with an automaton such as we used to see in the Eden Museum in New York city. The museum automaton was, of course, manipulated by human intelligence. It knew how to move. It played an expert game; but the real player was not visible. Playing with the automaton, manipulated by an unseen master player, was not like playing with the master himself.

The Irish woman was right. Folks are more interesting than stumps or automatons or fictitious corporate persons. Individuals are more interesting to most of us than any kind of an organization of individuals.

We hear much these days about the value of good relations between public utility companies and the public. Commissions speak favorably of its advantages. Utility executives recognize its good points.

Then, if you are a utility man in position to act, why not personify your business as much as you can? If folks are more interesting than stumps why not make your customers appreciate the fact that in dealing with your company they are dealing with folks and not stumps? Why not make the most of your personnel? Why not establish real personal relations?

Such a policy would do you no harm. It might serve you well, both as a sword and as a shield against occasional enemies.

Very truly yours,

Henry C. Spurr

HCS:R

When is a Rate "Reasonable?"

Because a utility rate is low does not necessarily classify it as fair; neither does a high rate brand it as unfair. This article points out some of the practical economic factors that determine what an equitable rate should be—and dispels some common illusions

By HENRY C. SPURR

MR. E. C. Riegel, director of the Washington (D. C.) Consumers Guild, has been looking up what the people of the District of Columbia pay for their city government and what they pay for their public utilities. He finds that it costs more for the utilities than it does for the government.

This shows, he says, that the people pay much too much for their utilities. He is backed up by a vigorous editorial in the Washington *Herald*.

Mr. Riegel finds that the sum of \$32,603,409 was paid by the residents of the city of Washington in a single year for public utility service and only \$24,470,755 for all the expenses of the city government. Commenting on these figures the *Herald* says:

"That is something to think about. It shows the enormously profitable character of the privately owned public utilities monopolies which exist only by grace of a franchise granted them by the public."

Both Mr. Riegel and the *Herald* single out the street railway com-

panies for special comment. The *Herald* says:

"The cost of upkeep of our streets was less than one-third the amount we paid to the street car companies. The streets accommodate the one hundred thousand automobiles of this city and the five hundred thousand pedestrians. It seems a bit steep to pay three times as much to keep the street cars moving as it does to keep the streets open for all other kinds of traffic. There are 605 miles of streets, and 209.19 miles of street car tracks."

GOVERNMENTAL service, Mr. Riegel believes, is much more important than public utility service. We can get along without public utilities, he asserts, but to be without police and fire protection is unthinkable. The *Herald* says: "Certainly the district services are more important to us. No one will question that."

The *Herald* uses the same reasoning in another editorial on the high cost of utility service, in which it says:

"That the taxes of public utility

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managements are substantial indeed appeared recently in a survey which showed that the telephone company alone took one-third as much from the people of New York city as the city took in taxes."

Mr. Riegel maintains that the public Utilities Commission, by its power to fix the rates charged by the utilities, has been delegated a taxing power, and that the people are being taxed outrageously. This the *Herald* also endorses. Finally the *Herald* asks:

"If the utilities were running the various services now operated by the district, is anyone rash enough to guess how much more they would cost?"

Stated briefly, the arguments are:

1. The cost of the city government is less than the cost of utility service; therefore, the cost of utility service is excessive.

2. The cost of the city streets is less than the cost of railway service; therefore, the cost of railway service is excessive.

3. Government service is much more important than utility service. The cost of utility service is more than the cost of government service; therefore, the cost of utility service is excessive.

4. QUERY: If we pay private companies more for utility service than we pay the city for governmental service which is much more important than public utility service, what would we have to pay for governmental service if that service were rendered by private companies?

As the *Herald* would say, all this gives us something to think about. One can easily see how these views if generally adopted, would bring about

profound changes in our present methods of rate making.

TAKE the case of the street railways. In the past we have had sharp differences of opinion as to the reasonableness of railway rates. Our Commissions have often been called upon to say whether the fare should be anywhere from 6 to 10 cents. The usual way of settling that question is to assume that the company is entitled to charge enough to take care of operating expenses, taxes, and depreciation, and to leave a little something for the stockholders. Most of our trouble has been over the allowance to the stockholders. The prevailing view is that they should have a fair return on the value of the property.

So it has been assumed that we must start in by finding out what the value of the property is. But the ascertainment of that value is a difficult and expensive proceeding. However, after we have the value we can figure out how much money we can afford to allow the stockholders. But it is also necessary to know what operating expenses, taxes, and depreciation are going to be. This manifestly adds to the perplexities of the problem. Hitherto no satisfactory means of cutting the Gordian knot have been found.

The way to escape this pyramid of difficulties has now been discovered. Our rate proceedings would be very much simplified if we should adopt the reasoning of Mr. Riegel and the *Washington Herald*. All we would have to do would be to start with the assumption that the cost of street railway service should be no more than

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the cost of maintaining the highways. It might indeed be unfair to the railway company to assume that the cost of railway service per mile should be no more than the cost of maintenance of highway per mile, but we might be liberal enough to give the company the benefit of the doubt and assume that the cost of railway service for one mile should be no more than the cost of the maintenance of highways for two miles. That would be fair enough. Having disposed of this preliminary question the rest would be easy. The books of the city would disclose the cost of the highways. Having ascertained that, the reasonable cost of street railway service could be quickly calculated, with a minimum of delay and expense. Knowing what the total cost should be all that would be left to do would be to fix a fare to meet it. We would in this way get rid of the expensive services of valuation engineers, and perhaps to some extent those of skilled accountants. We would hear no more about the relative merits of prudent investment and value-of-property theories of rate making.

It will thus be seen that this suggestion of Mr. Riegel and the *Washington Herald* may lead to some revolutionary changes in our methods of handling rate problems.

THE advocates of this new theory of determining the reasonableness of street railway charges have been very conservative in their application of it. The comparison between miles of highways and miles of street railway tracks is unfavorable enough to the railways, but how much worse the showing against them

would have been had the comparison been made between square feet of highway surface and the square feet of steel rail surface! This inclination not to push the argument too far, however, makes it all the more effective.

It is true, this new and inexpensive method of rate making might encounter some bumpy atmosphere in the courts, but that difficulty is not insurmountable. There are ways of circumventing the courts. Besides they sometimes reverse themselves, and, after all, there is no telling what they might do in this case, as the idea has never been presented to them.

The suggestion that the reasonableness of the utility charges can be determined by a comparison with the cost of governmental service would appear not to be so practical, however, when applied to utilities generally, as it is in the case of our street railways. If we say that the cost of governmental service furnishes a fair basis for determining the reasonableness of the cost of utility service as a whole, we would still have no basis for determining the reasonableness of particular kinds of utility service. If Mr. Riegel assumes that the total cost of every form of utility service should not be more than \$25,000,000 a year—the total cost of the city government for the same period—how should that \$25,000,000 be divided among the telephone, telegraph, electric, gas, and water companies?

The fact that the utilities, lumped together, are receiving more revenue than they should, does not mean that any one of them is charging too much.

Some specific comparison, as in the case of the street railways must

A Common Fallacy About
a Utility Rate—

¶ *"The popular view is that when a State Commission fixes a utility rate to produce a certain return, the state guarantees that return to the company; but this is not the fact. The Commission merely declares that such or such a rate is reasonable and that the company is fairly entitled to the return—if it can get it."*

¶ *"The company has to render the service if demanded, but can compel no one to take it."*

be found for a practical solution of the question of reasonableness of charges of the individual utilities. Perhaps the cost of telephone service could be compared with the cost of police protection, of gas service with the cost of fire protection, of electric service with the cost of maintaining the city parks, of water service with the cost of ash removal, and so on.

Seriously considered, what is the matter with this argument that the cost of utility service is excessive because higher than the cost of governmental service? The fallacy should be obvious to students in the most elementary classes in economics.

The comparisons made by Mr. Riegel and the *Herald* are of services of different kinds rendered under conditions that are not the same. Cost or price comparisons to be of any value must be of the same thing produced under similar conditions.

THE question of the value of rate comparisons has often come up before the Commissions. Such evidence is not regarded as important where the nature of the product or the character of the service is different.

It has been held, for example, that the comparison of railroad rates is of no value unless it is shown that the transportation conditions were similar. The Pennsylvania Commission once said that a comparison of rates of a utility operating in a city with the rates of a utility operating only in a sparsely settled community leads to fallacious conclusions as to reasonableness of the charges. In an early Wisconsin case the Commission said that comparisons to determine the reasonableness of telephone rates are unsatisfactory in the extreme where they do not take into consideration the character of the territory in which the service was furnished, the extent and character of the plant used, the manner in which the plant is maintained, the general quality of the service, and a multitude of other considerations.

No rule in the field of regulation is better settled than is the rule that the comparison of rates, even of the same kind of utilities, are of little value in view of the fact that operating and other conditions are generally so different.

But Mr. Riegel and the *Herald* go

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further by making comparisons between kinds of services that have nothing in common. Police and fire protection service cannot be likened to gas and electric service. Saying that the cost of utility service is excessive because we pay more for it than we do for running our city government is like saying that a piano costs more than a banjo; therefore, the price of the piano is excessive.

Or that a bunch of bananas costs more than a bag of peanuts; therefore, the charge for the bananas is extortionate.

Or that a suit of clothes costs more than a celluloid collar button; therefore, the clothes cost too much.

Or that it cost more to dig the Panama Canal than it did to erect the Woolworth building; therefore, the cost of the Panama Canal was extravagant.

Or that a good cook costs more than our entire household utility service; therefore, her wages should be reduced.

As everybody knows, however, the reasonableness of what we pay for pianos, bananas, clothes, canals, and cooks cannot be determined by what it costs for banjos, peanuts, collar buttons, office buildings, utility service, or anything else, in fact.

To show that it costs more to keep street cars rolling than it does to maintain the highways does not prove that the price of street car service is too much. Constructing a highway and keeping it open and safe for traffic is quite a different undertaking from that of building a street railway, providing rolling stock, and paying thousands of men to operate the cars.

Besides, to digress a little, not all of the money paid to the street railways and other utilities which Mr. Riegel and the *Herald* say is a burden on the public goes to the utilities as the reader might be led to infer.

Part of it—a substantial part—goes to pay the expenses of the government itself. This part is a tax for the benefit of the city, but usually blamed on the companies. In one city, part of the street railway fare goes to support the public parks. In another instance a street railway company got a franchise by which it was required to construct the pavement for the entire length and width of the street occupied by its tracks. If the *Herald* were familiar with this case, it would have furnished a much stronger illustration than that of the Washington railways. The *Herald* might have said:

"Here is a city which constructs and maintains a street pavement for nothing; but see what the railway which occupies that street costs!"

A considerable part of what all utilities get from their patrons, goes into the treasury of the city. The utility takes this money from the pockets of its patrons, but the government makes the company do it. Surely the company cannot be blamed for this part of the cost of the service.

THEN there are the labor costs which absorb a very substantial part of the money which comes from utility patrons. If this sum, paid to utility employees, is a "burden on the public" then labor, and not the utilities, is to blame for it.

A street railway has to have street rails and rolling stock. Part of the

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money it gets from its patrons goes to pay for those necessities, and not to the stockholders of the street railway. If what steel rails and street cars cost is a burden on its patrons, the street railway cannot be held responsible for it.

The assumption that the entire cost of utility service is a burden on the public for the sole benefit of the stockholders, is manifestly unsound.

But to get back to the value of comparisons.

MR. Riegel and the *Herald* might say: "You have illustrated our argument unfairly. You assert that we say in substance: 'a piano costs more than a banjo; therefore, the price of the piano is excessive.' What we say is that governmental service is more important than utility service; therefore, the price of utility service is excessive. A piano is more important than a banjo; it ought to cost more."

Mr. Riegel does say, as previously stated, that we can get along without utility service, but that to do without police or fire protection would be unthinkable; and that is apparently the reason he thinks utility service should not cost as much as it does.

This, however, is also a fallacy which should be evident to students in the most elementary classes in economics. Suppose the piano illustration be changed a little. Let us say a piano costs more than a bushel of potatoes. A bushel of potatoes—after a hard day's work at least—is more important than a piano. Therefore, the cost of the piano is excessive. That is what Mr. Riegel and the *Herald* say in effect.

But the reasonableness of the price we pay for an article or service is not determined by its usefulness.

Natural gas has a higher heating value than artificial gas. Rates for natural gas might be very much lower than rates for artificial gas. That would not prove that rates for artificial gas were unreasonably high; nor, on the other hand, if we started with the assumption that rates for artificial gas were reasonable, would this prove that rates for natural gas should be increased.

Nothing we use is as important as the air we breathe. But air is free. That does not show that the price we pay for a loaf of bread or a pair of shoes is extortionate.

So the relative usefulness of governmental and utility services is of little importance in determining the reasonableness of what we pay for them. The charges for each of these services are based upon the cost of rendering them, not upon their value to us. If it costs more to produce utility service than it costs to produce governmental service, we shall have to pay more for utility service, or we shall not have it.

Perhaps we could, as Mr. Riegel says, get along without utility service provided we did not care how much it would cost us to get along without it.

There was once a man who thought he was being overcharged by everybody. So, to escape this exploitation, he decided to make, with his own hands, everything he needed. He made his own hats, his own coats, his own shirts, his own shoes, even his own false teeth. He was a poor eco-

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nomist, however, because to do all of this he had to work from fourteen to sixteen hours a day; and even so, his teeth were not as good as a dentist could have made. This man who thought he was being exploited was only fooling himself. Most of us would be in pretty bad shape if we were not exploited by our busy neighbors bent on making their fortunes.

CONSIDER what electric service means to us and whether we could afford to be without it. According to an editorial in Hearst's *Atlanta Sunday American*:

"The American Workman is the most prosperous on earth because he has re-established slavery on a new scale, slavery of the powers of nature.

"Power in the form of electricity, is just being put to work by the American woman, lifting the drudgery of ages off her shoulders.

"Electricity is beginning to do the back-breaking work of the modern farm and enabling the farm wife for the first time to live like a human being.

"The woman who does without the help of electricity is burning up her looks and values her time at less than three cents an hour, the average cost of electric current."

Yes, we could get along without our electric utilities, but we would be playing fast and loose with our own welfare if we did so.

Take telephone and telegraph services. Could we afford to get along without them? We know that there are today thousands of calls on the telephones for ambulances and doctors to save human lives. Suppose there were no telephones or telegraphs. Does anybody doubt that thousands of lives have been saved

by the telephone and the telegraph? All of the lives that were lost in the battle of New Orleans could have been saved if these utilities had then been in operation. The battle was fought after the declaration of peace, but there then was no means of communicating this intelligence quickly enough to avert the battle. Our new utility, the radio telegraph already has to its credit the saving of many lives at sea.

How much time does the telephone and telegraph save in business and social affairs and even in the operation of the government itself? What part do they play in police and fire protection? Could we afford today to wait three weeks to get a message from New York to Boston? We could if we didn't care how much we would lose by it.

How much do the railroads and other utilities save us? How much have they added to the value of our estates? Nobody knows the exact figure, but most of us understand that they have put much more money into our pockets than they have taken out. But we could do without them if we had no objection to impoverishing ourselves.

Yes, indeed, we could possibly get along without utility service—we once did—but we would have much less money than we now have, to say nothing of added inconvenience; and we would have to work much harder for the less we would have.

OUR present standard of living would be impossible without utility service; but utility service itself could not be had without governmental service. Other things,

The Factors that Determine "Reasonableness"

¶ *"Under the modern theory of regulation the reasonableness of the charges for utility service is determined by the reasonableness of the cost of that service.*

¶ *"That general cost is made up of the COST OF OPERATION, of TAXES, of DEPRECIATION, of MANAGEMENT, and of MONEY.*

¶ *"If these costs are reasonable, the charges for utility service cannot be said to be unreasonably high no matter what anything else may cost."*

vitality important help to make what we call our modern civilization possible. Just how important each of the factors is, would be hard to say.

A modern newspaper press is a great machine. It has many parts. There is the big steel structure, the steel cylinders and rollers, the metal plates, the belts, the levers, the paper and the ink. If the paper were not right, the entire mechanism of the mighty press would be useless. If the composition of the rollers which spread the ink was not what it should be, the press might as well come to a standstill. The successful operation of the press is due to a surprisingly large number of factors, the absence of any one of which might hamper or destroy its usefulness. It is easy enough to say that the steel is more important than the ink, but each would be useless without the other.

If it were necessary to determine the relative importance of governmental and utility service in our modern social organization, in order to find out whether charges are reasonable, it is not so certain that

utility service would stand as low in comparison with governmental service as Mr. Riegel or the *Herald* think it would.

If all police and fire protection were suddenly withdrawn, for a week or a month, it would be serious enough, but the lawful elements of the community would somehow find a way to protect themselves from the lawless. But if all railroad and other utility service were to stop, would not the situation be quite as alarming? Would we not be faced with disruption of most of our vital activities and even with pestilence and starvation before we could adjust ourselves to the change? What could all of the forces of the government do to save us?

However, it is idle to speculate about the relative importance of governmental and utility service, because even if we concede that we could not get along without the one and we could without the other, that fact, as already pointed out, would have no bearing whatsoever upon the reasonableness of the charges for either kind of service.

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BOTH Mr. Riegel and the *Herald* think that the power of Commissions to fix utility rates is the power to tax. It is easy enough to say that if we are not bothered much about accuracy. A tax is a charge laid upon persons or property by the government for the support of the government. Fixing a utility rate is not fixing a charge for the support of the government. Before railways were regulated they could fix their own rates. That was no more a power to tax than the power of a grocer to fix the price of tea and coffee is a power to tax; and the power of the states to fix rates is no more a power to tax, than is the power of the companies themselves to fix the rates.

When the government levies a tax for its support, there is no honest way of escaping payment. It is a compulsory charge. A utility rate, on the other hand, whether fixed by the company, by the legislature, by contract between the company and a city, or by a State Commission, is not a compulsory charge. As Mr. Riegel himself says, we do not have to take the service.

The popular view is that when a State Commission fixes a utility rate to produce a certain return, the state guarantees that return to the company; but this is not the fact. The Commission merely declares that such or such a rate is reasonable and that the company is fairly entitled to the return if it can get it. The company has to render the service if demanded, but can compel no one to take it.

The statement that the power to fix rates is a power to tax is interesting, however, not so much because of its inaccuracy, as of its implication.

WHAT are Mr. Riegel and the *Herald* trying to do? Are they not endeavoring to attach odium to utility charges by calling them taxes? Do they not say utility charges are taxes because they think that the word "taxes" will arouse an unpleasant emotion?

In spite of the high value of the service they say the government renders, do not those to whom they may hope to appeal not grumble about paying for those services, more than they do about paying for utility service? If they do not, there would be no object in trying to stigmatize utility charges as taxes.

The truth is, we often pay more for nonessentials than we do for essentials, without a whimper, while we growl and snarl over rock-bottom prices of essentials.

Tobacco costs us more than electric light and power. Presumably electric light and power are more useful than tobacco; but a real he-man who would say nothing about the cost of his smokes might break a commandment over an electric bill.

Tax bills are so unpopular that all sorts of methods are employed to disguise them, and to shift the burden of the support of the government from one class of citizens to another. Yet governmental services are important. Probably Mr. Riegel and the *Herald* would say they are more important than almost anything else. If they are, there should be no complaint against the cost of that service; but no matter how valuable that service may be, or how reasonable its cost, tax bills will not be cheerfully paid. Tax bills have nothing on utility bills in that respect.

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THE final question of the *Herald*, as to what the cost of the government "which is less than the cost of our utilities" might be if the government were run by private individuals on the same basis as our utilities, is a tough one. A lawn mower costs more than a step ladder. What would a step ladder cost if made by the lawn-mower man? It might cost more; it might cost less. It is hard to say. It's a guess.

TO SUMMARIZE: The reasonableness of utility rates cannot be determined by comparisons with the charges for service of a different character; nor even by charges for the same kind of service rendered under different conditions; nor can the rea-

sonableness of the rates be determined by the importance of the service as compared with the importance of something else.

Under the modern theory of regulation the reasonableness of the charges for utility service is determined by the reasonableness of the cost of that service. That general cost is made up of the cost of operation, of taxes, of depreciation, of management, and of money. If these costs are reasonable, the charges for utility service cannot be said to be unreasonably high, no matter what anything else may cost.

The charges for utility service, however fixed, are no more a tax than is the price of an overcoat a tax.

Mr. Riegel Loses His Case

MR. E. C. Riegel, director of the Washington Consumers' Guild, has received a set back in his campaign against the practice of utilities in requiring deposits from prospective consumers. Justice Bailey in the supreme court of the District on May 17th upheld a decision by the Public Utilities Commission of the District of Columbia sustaining the right of the corporations to demand a deposit.

Following the dismissal by Justice Bailey, Mr. Riegel gave notice to the local court of an appeal to secure a review of the principles involved.

The issues presented in this case were discussed in an article in the PUBLIC UTILITIES FORTNIGHTLY of February 7, 1929 under the heading "When the Utility Customer Won't Pay His Bills." There will be found the interesting theory of the Guild's director that the matter of insuring payment of utility bills is something for the consumers rather than the company to worry about since the losses from this source are reflected in rates. Attention is there directed to the fact which the complainant overlooked, that not all consumers have the same interest in the question, but that there may be a conflict of interests between the consumers who pay their bills and those who do not, and it is for their benefit that the utility adopts rules to secure fair treatment of the consumers who pay.

Remarkable Remarks

FRED W. SHIBLEY
*Vice-president, Bankers' Trust
Co., New York*

"It is easy to make business pay."

EDWARD N. HURLEY
*Formerly Chairman of the Federal
Trade Commission.*

"The politicians have not learned that it does not pay to run on platforms which simply attack business."

ADAM SMITH
Economist (1723-1790)

"Business men seldom foregather without plotting against the public good."

ABRAM F. MYERS
*Former Chairman, Federal Trade
Commission*

"The Federal Trade Commission, more than any other government establishment, has suffered from a plague of interpreters, both within and without."

R. W. GALLAGHER
President, East Ohio Gas Co.

"Public relations is just another way of saying customer relations."

PRESTON S. ARKWRIGHT
*President, National Electric Light
Association*

"For every dollar invested in constructing the facilities of an electric light and power company it is estimated that the resultant expenditures of capital in activities utilizing such service will be \$6.50. The dollar, therefore, invested in the electrical industry not only renders its own work, but it leads into useful service six and a half of its fellows."

FRED C. KELLY
Writer

"Far more money is dropped on stocks selling at less than \$10 than on those which have soared above \$300."

DONALD A. LAIRD
*Chief of Staff, Personal Analysis
Bureau, Chicago*

"I have heard of business men who took their vacations early in June to avoid being besieged in their offices by eager college graduates looking for jobs."

GEORGE B. PARKER
*Editor-in-chief, Scripps-Howard
newspapers*

"Until the public utility itself will recognize and is willing to recognize that the public resents secret propaganda, resents the idea of the label being left off, the public utility is going to continue to be in hot water in quite the same degree as it was before it adopted this idea of dealing with the public through public relations engineering, in quite the same degree as it was back in the old 'public be damned' days."

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EDWARD F. MCKAY
*Manager Oklahoma Utilities
Association*

"Perhaps we cannot be sure of making better speeches, but we can make them shorter."

MARTIN J. INSULL
*President of the Middle West
Utilities Company*

"Business always needs public confidence, and this confidence can only be obtained if business men themselves inform the public about all phases of their business."

SAMUEL O. DUNN
Editor "Railway Age"

"Any proposal directly to regulate profits in business generally would encounter overwhelming opposition on the ground that business could not be efficiently and successfully conducted under any such policy."

GEORGE ROTHWELL BROWN
Columnist

"Wall Street hands down the decision that a railroad stock is worth what a sucker will pay for it."

HERBERT HOOVER
President of the United States

"I am confident that there will be no increase in railroad rates as a result of the O'Fallon decision."

FRED W. SARGENT
*President, Chicago &
Northwestern Railroad*

"It (the O'Fallon decision) will encourage further development and improvement and probably will not adversely affect rate structures because rates have been and will continue to be made on what the traffic will reasonably bear."

R. H. ASHTON
*President, American Railway
Association*

"The railroads have for some time realized the disastrous effects of carelessness and have been and are actively engaged in attempting to reduce it to a minimum so far as they are concerned."

R. W. GALLAGHER
*President, East Ohio Gas
Company, Cleveland*

"People now-a-days want service; they want a good article, they want a good backing behind it and they want reasons. There are a dozen places to put their money where once there was but one. All of these places are good ones, too, and we must compete with them for the single, simple, and sufficient reason that they are competing with us."

PRESTON S. ARKWRIGHT
*President, Georgia Power
Company*

"When I read in the paper that one of the street cars of this company has run over a little child and mangled it or crushed out its life I cannot help feeling that I am standing on the front platform of that car. And so I am standing on the front platform. And each and every one of us is standing on the front platform in responsibility, for the motorman who stands there in person is there only as our representative and we bear the responsibility with him of all of his acts."

The Changing Attitude Toward Public Utility Corporations

By THE MAN ON THE STREET

ASK the man on the street what he thinks of his street railway company, his telephone, gas or electric light company, if you want to get a fair estimate of public opinion of an industry that has been maligned, misrepresented, and muckraked.

The chances are he will give you an intelligent, fair-minded answer, devoid of any of the pet theories so common until recently among certain politicians and reformers. His thoughts, you will find, are farthest from government operation and political control. In fact, he rather looks upon these theories as being inimical to his own interests.

I know, because I am he.

Certainly, a change has taken place in the public mind regarding public utilities, their operation and regulation—a change that has converted the consumer from an enemy to an ally.

A FEW years ago all but a comparatively few persons shouted "Booh!" when "Wall street" was mentioned. Today, the situation is different; those who are not participating in the operations of Wall street are the exception rather than the rule.

So with the utilities. There are millions on the inside, so to speak,

and, of course, one's point of view naturally changes with one's position. Customer-ownership, as practised by utility companies, has paved the way to popular favor.

As nearly as can be estimated there are about 2,500,000 investors in public utility securities. Their number is increasing at the rate of approximately a quarter million a year. Assuming that each investor has a family of three, it follows that one out of every sixteen persons in the country has a financial interest in our public utilities. Collectively, they are the owners of the twenty-six billions of dollars—a sum equal to the national debt at the war peak—invested in electric light and power, gas and telephone companies, and street railways.

THE widespread distribution of public utility securities has a significant bearing on the growth of the industry itself, the rates charged to consumers and the individual welfare of a large proportion of our population. Things were different a quarter century ago when a public utility security was considered a poor risk.

In 1900, for instance, there were about 7500 holders of American Telephone & Telegraph Company securi-

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ties. Today this company and many other public utilities are considered "market leaders." The American Telephone & Telegraph alone numbers about 450,000 stockholders, 55 per cent of whom have holdings ranging only from 1 to 10 shares each. There is nothing in corporate or government financing that compares with the maximum distribution of public utility holdings, except, perhaps, the Liberty Loans.

This distribution of utility securities was brought about by the adoption by hundreds of companies of the system of customer and employee ownership. The telephone company was the first large organization in the group to adopt and foster the plan. That was in 1915. Since then, utility companies, both large and small, have recognized the wisdom of striving for maximum distribution of their securities. Latest figures available indicate there are close to 300 electric light and power companies alone which have financed their properties in whole or in part on the basis of customer and employee ownership.

Primarily, perhaps, the stability of the industries comprising this group and their fundamental place among the industries of the country are explanatory, in part, of their attraction to the hosts of present and future investors in their securities. The rapid growth of public utilities in recent years is unlike anything in American industrial history since the early days of railroading.

LAST year, public utility financing reached the staggering total of \$2,427,790,000. This figure represented about 30 per cent of the total

corporate financing, and placed the utilities ahead of all other groups in the matter of extensions and improvements to properties. The budget for additions and betterments to the electric light and power industry alone, for the first time, exceeded that of the steam railroads.

Above all, however, the investor feels a degree of security in public utilities because the business, whether power, gas, telephone, transportation or electric light, is regulated with considerable strictness by State or Federal Commissions, and in many jurisdictions the issuance of the securities themselves is supervised so as to give the investor a high assurance of safety.

Commission regulation, no doubt, has helped to insure a ready market for public utility offerings.

THE business of distributing securities in time past was left to the brokers and bankers who legitimately charged a fee for their work. For the securities of the larger, more popular companies, the fee may have been as low as $1\frac{1}{2}$ per cent, while the smaller and newer companies were obliged to pay as high as 10 per cent. An average brokerage charge for public utility issues may be figured at 5 per cent. On this basis, the companies which issued securities last year would have had to pay in excess of \$121,000,000 to market the two and one-half billions of obligations which went into the hands of investors. This is a sizable item and has a direct bearing on the prosperity of the companies and the rates charged by them for their services.

Fortunately, however, many of

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these companies, through the system of customer-ownership, were relieved of the heavy brokerage obligation. They had a ready market for their new securities by reason of the fact that they had built up a clientele of satisfied investors and were able to distribute their securities through their own investment departments. The cost of marketing securities under this system may be estimated conservatively at one-half of one per cent. Assuming all the public utilities issuing securities last year did so through their own departments, the saving in brokerage fees would have been more than \$100,000,000.

With about 450,000 stockholders on its books, the American Telephone & Telegraph Company would have little difficulty in marketing an issue of \$100,000,000 or more, should it choose to do so, among its own subscribers, and at a minimum cost. This would have been another task back in 1900.

Undoubtedly, customer ownership establishes a free and ready market for a company's securities. What is more, these securities are placed in the hands of investors who are most interested in the growth of the company and the improvement of its service.

WALTER S. Gifford, president of the American Telephone & Telegraph Company, in a recent annual report, expressed the theory and principle behind the distribution of the company's securities:

"The organization is, in a sense, unique and distinctively American in character" and there are no telephone fortunes.

"The ownership of the Bell Telephone System is widely distributed.

Every section of the country and probably every occupation of its citizens are represented among the hundreds of thousands of stockholders of the American Telephone & Telegraph Company. For over forty years no individual or small group has owned a controlling interest in or even a relatively substantial part of the stock of the American Telephone and Telegraph Company (or its predecessor the American Bell Telephone Company). It is in keeping with our democratic ideals and institutions and in a very real sense is a reflex and an expression of them.

"Widespread ownership permits, and in fact obliges, management to make its decisions with a long look ahead rather than for the possible temporary advantage of the moment. Obviously, in the case of the American Telephone & Telegraph Company, sound business dictates that the continuing aim shall be to improve service in its broadest sense and to furnish that service at the lowest possible cost."

PERHAPS no other phase of public utility activity has been so instrumental in creating and fostering public good will. Customer ownership has been an important factor in making people know their public utilities. Companies with a wide distribution of their securities are less likely to encounter stubborn, and often unfair, opposition to their proposals than those which are closely held by a few large investors. The press, also, is more apt to assume a more tolerant attitude.

On the other hand, customer-owners, being essentially investors of small means, have been encouraged and aided by the companies to put their savings to work through the deferred payment plan which is a part of virtually every system of customer

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ownership. In this manner, the utilities have educated their customers to the value of sound securities and have helped to wean them away from the fly-by-night, blue-sky stock promoter. From this angle alone, the public utilities which have placed their securities in the hands of millions of small investors have rendered a notable service to the country and have done much to help disseminate national prosperity.

ANOTHER and equally important phase of this problem is the opportunity offered by the companies to their employees to share in the profits of the companies for which they work. Many of these employees would not own stock in any corporation were it not for the liberal partial payment plan worked out by the companies.

The last decade has seen a rapid development in employee stockownership. There are today approximately 85,000 employees of the Bell System who own stock in the American Telephone and Telegraph Company at the present time, some 225,000 Bell System employees are paying for American Telephone and Telegraph stock on a partial payment plan. Virtually every plan of employee stock-ownership emanated from the

management and is in effect an extension of the management functions into the field of personnel relations.

Recently the employees of the Pennsylvania Railroad were offered an opportunity to subscribe for stock in that corporation. Of the thousands who availed themselves of this privilege, virtually all of them admitted that they would not have been able to do so except for the plan of easy payment worked out by the company. Needless to say, employee ownership of stock has been a boon to thousands of workers throughout the country.

IN the final analysis, customer and employee ownership of securities has injected a new spirit in the life of the public utilities. It has brought about an *esprit de corps* hitherto unknown in the rank and file of its workers; it has helped to create a favorable public opinion, and it has relieved the companies of certain more or less burdensome charges which could be eliminated only through the system of widespread distribution of their securities.

What is more important, customer-ownership means the eventual drowning out of the cry of government operation and control of the public utilities of the country.

“THE Commission is charged with the duty of regulating the railroads of this state. We fix the rates from which the revenue is produced. We order services increased or diminished, require that adequate facilities for the use of the public be maintained and often order expenditures of large amounts for improvements. In doing this and in properly regulating the carriers, we cannot escape the duty and responsibility of guardianship to the extent that no unwise and unnecessary expenditures may be ordered.”

—COMMISSIONER B. M. RICHARDSON OF IOWA,
(in a dissenting opinion).

WHAT READERS ASK

Out of the mail bag of the Editor have come these questions; because they touch upon subjects of broad interest to those in the public utilities field, they have been selected for publication—together with the answers. What questions do *you* want to ask?

QUESTION

May a public utility company be subject to the jurisdiction of both the Interstate Commerce Commission and a State Commission?

ANSWER

Yes. A telephone company, for example, may be subject to the Interstate Commerce Commission as to its interstate rates and to State Commissions as to its intrastate rates.



QUESTION

When was uniform accounting first prescribed as a regulatory policy?

ANSWER

Massachusetts seems to have been the first state to develop accounting and auditing features of railroad reports. In 1876 the Massachusetts Board of Railroad Commissioners was authorized to "prescribe a system by which the books and accounts of corporations operating railroads or street railways could be kept in a uniform manner," and to examine the books and accounts of such corporations to see that they were properly kept. A form of annual reports and classification of accounts for gas companies was adopted in 1885 and for electric companies in 1887, the year of the creation of the Interstate Commerce Commission. In 1905 when New York established a Commission for Gas and Electricity the Commission was given supervisory powers over accounts. A considerable portion of the early proceedings of what is now known as the National Association of Railroad and Utilities Commissioners was taken up in discussions of the desirability of establishing uniform account-

ing; but in spite of the agitation in favor of this regulation it was not until 1907 that the Interstate Commerce Commission was given authority to prescribe the form and method of keeping the accounts of common carriers.



QUESTION

Are public utility securities, generally speaking, considered safe investments for trust funds?

ANSWER

The market for the securities of the larger public utility corporations has materially broadened within recent years. With the growth and expansion of industry, the constantly increasing uses of new utility services and the widespread distribution of utility holdings, the obligations of public utility corporations are assuming a dominant place in the corporate security market.

The savings bank laws of a number of states permit the investment of savings bank funds in public utility securities. With the increasing public favor these securities are meeting, it is only a question of time before all the states, which are considered to have the most conservative banking laws, will accept high-grade utility securities as meeting the investment requirements for savings banks and trustees. The acceptance of public utility securities by the states for these purposes already has had a marked effect on the price of certain high-grade utility issues. Insurance companies also are expanding their holdings in this group and have become a very important factor in the distribution of public utility securities. In point of inherent strength, many of the public utility bonds cannot be surpassed by the highest grade railroad bonds available. Leading utility securities, measured by standards

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of safety, marketability or yield, will compare most favorably with the highest type of corporate security.

QUESTION

Public utility holding companies frequently are criticized from the point of view that they place the minority stockholders at a decided disadvantage. Is this criticism justified?

ANSWER

This criticism is in part warranted in that the minority stockholder has a narrower market in which to dispose of his holdings, and the importance of his voice in the direction of the subsidiary company becomes practically negligible. This position, however, is one of the minority stockholder's own choosing, as the holding company acquiring control of any public service company is willing to take over the minority on the same basis as it takes over the majority stock.

Generally speaking, the minority stockholder who "holds out" is hopeful he may ultimately compel the holding company to pay him more for the minority stock than it was willing to pay for all the stock. Even though he may fail in his attempt to obtain a higher price for his holdings, he is not appreciably injured in that he shares proportionately with the holding company in all the profits of the subsidiary. As a result of the holding company's management, his stock usually is strengthened, is made more stable and its earnings increased. He may remain "out of the picture," so far as control is concerned, but his investment is rewarded share for share along with the investment of the holding company according to the earnings of the subsidiary.



QUESTION

How many broadcasting stations are owned by public utility corporations?

ANSWER

According to the figures compiled by the Federal Radio Commission, only about eight broadcasting stations are owned by corporations that may be classified as public utilities; three of these are broadcasting companies, which do not properly come within this category at all—unless a broadcasting company may be designated as a public utility; on this point there is a difference of opinion. But even including these,

the list of stations owned by utility companies, so far as the records of the Commission indicate, are as follows:

CALL LETTERS	LOCATION AND OWNER	SHARES WITH
WBAL	Glen Morris, Md. Consolidated Gas, Electric Light & Power Co.	WTIC
WEEI	Boston, Mass. Edison Electric Illuminating Co.	
WENR	Chicago, Ill.	
WBCN	Great Lakes Broadcasting Co.	WLS
WFBM	Indianapolis, Ind. Indianapolis Power & Light Co.	WSBT
WTAM	Cleveland, Ohio.	WGL
WEAR	WTAM & WEAR, Inc.	WTAM
KFIU	Juneau, Alaska. Alaska Electric Light & Power Co.	WEAR



QUESTION

When were Pullman sleeping cars first used on the railroad?

ANSWER

According to Samuel S. Wyer, Consulting Engineer of Columbus, Ohio, George M. Pullman at Bloomington, Illinois, began the rebuilding of Chicago & Alton Coaches Number 9 and 19 in 1858 to convert them into the first Pullman sleeping car using the Pullman invention of upper berth construction which made it possible to close the upper berth in the day time and also to use it as a receptacle for bedding. The first trip from Bloomington, Illinois to Chicago was made September 1, 1859. The first Pullman car built from the ground up as a sleeping car was the "Pioneer" which was finished in time in 1865 to carry part of the Lincoln funeral party from Chicago to Springfield.



QUESTION

What does the "per cent unaccounted for" gas mean?

ANSWER

"Per cent unaccounted for" gas has been defined as the ratio of the cubic feet of unaccounted-for gas for a given period divided by the cubic feet of gas sent out for the same period.

Congress Waves the "Big Stick"

By JOHN T. LAMBERT

THE spirit of Colonel Theodore Roosevelt when he was lambasting the corporations has taken hold of a substantial section of the United States Senate.

In that inquisitive body there has been fomented a stern demand for drastic regulation of the newer giants of the public service world. A big stick era seems to be on the verge of one of its periodical and temporary vogues. Evidence of it is abundant and impressive.

SENATOR James Couzens of Michigan has succeeded to the chairmanship of the Senate Committee on Interstate Commerce, and Mr. Couzens takes his duty seriously and aggressively. He has experimented with practical tests in at least one branch of the public utility domain and no doubt counts himself an expert in the matter. When mayor of Detroit, he turned his energies primarily to the solution of a pressing street railway problem.

Mr. Couzens is now devoting himself to proposed legislation for Federal regulation of radio, the telephone and telegraph industries and water power utilities. He recommends that there shall be established in Washington a new bureau with unlimited authority to prescribe the rates and services of those institutions in so far as the national government may act.

The Michigan Senator is supplied

by nature with courage aplenty. He has that two o'clock in the morning courage which Napoleon said was so scanty among some of his generals. He is persevering and relentless. Now that he has taken hold of this proposal for regulation, the utilities which regard it as dangerous and coercive may proceed upon the premise that Mr. Couzens will not let go of it until it has had its day in the Senate court.

In short, there is destined to be a battle royal upon the entire subject of national regulation.

Presumably a bill favorable to the most enthusiastic advocates of complete regulation will be produced by the committee of which Mr. Couzens is chairman. That committee has not been noted for any over-friendliness to the utilities. A new crop of conservative Republican Senators now adorns the back rows of the Senate circle, but that they can not hold the fort against the customary coalition of Democrats and Republican "liberals" was early demonstrated in the vote taken on the debenture plan of farm relief.

THE demand for national regulation may be said to have started with the birth of the Walsh resolution and the Montana Senator's two speeches in its behalf on the Senate floor. Widespread use to which the radio may be devoted in a national

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campaign was demonstrated by the last Presidential canvass and that fact has quickened interest in the entire subject of national radio regulation. President Hoover's inaugural address in which he touched upon regulation raised a question mark as to his real intent in the matter, but it nevertheless brought the subject to the foreground. But when all is said and done, the investigation of the electric industry by the Federal Trade Commission has laid the groundwork upon which the "liberals" can erect their loudest demand for national regulation.

So, be prepared for long Senate dissertations in the future on whether and to what extent the national government can launch any new formulae for public control of the utilities. The old arguments for and against the theory of national interference with state's rights will be lifted out of the cedar chests and exhibited to the present generation.

SENATOR Walsh doubtlessly had a long vision of this prospective situation when he appeared before the Senate Interstate Commerce Committee in January of 1928 to argue for the adoption of his investigatory resolution. His argument was then elaborate and all-inclusive. He then contended, for example:

That the Supreme Court held in the Swift case that unified buying or selling through the medium of holding corporations often limited the market and thus resulted in a restraint of trade.

That in the Shreveport and Minnesota rate cases, the Court held that in order to regulate the interstate rates it was necessary to control also the intrastate rates.

That the court has held that in the writing of an insurance policy or the sale of a lottery ticket by mail, express or other form of communication between states, the transaction took on an interstate character.

In connection with the above, Senator Walsh pointed out that the securities of a power company in Nebraska might be offered for sale to a Kansan by a brokerage house in Chicago and he insisted that this was an interstate business which the states' blue sky laws found impossible to regulate.

WHEN this groundwork was laid by Senator Walsh before the committee which is now captained by Senator Couzens and which is considering the proposed national regulations law, the power people did not, perhaps for good reasons, exhaustively combat it. They did assert that the existing powers of State Regulation are ample to correct any abuses which may arise, either in electric rates or in the sale of securities. But they bended their efforts largely to an attempt to prevent the adoption of the resolution of investigation. They contented themselves somewhat with insisting that Senator Walsh had not produced any evidence of abuses; that he had not made a *prima-facie* case for investigation and with the argument that any probe of national character might unsettle the confidence with which the conduct of the utilities was regarded by the public.

There will be plenty of occasion for argument on the basic principles in the future. Messrs. Couzens and Walsh rarely give up a fight until it is finally settled.

THE FALLACY OF

Bargain-Price Capitalization

The important part that depreciation plays in estimating "continuous operation costs" of a street railway, when second-hand equipment is purchased.

By DAVID LAY

CINCINNATI is a city of large open spaces—which make it a beautiful place to live in but which add to the cost of transportation.

The people of that city have been having a controversy over the extension of railway or bus service to the villages of Sayler Park and Fernbank, lying some miles west of the city, but annexed to it back in 1912.

The question is whether the inhabitants of these outskirt villages shall be served by busses, by an interurban line, or by an extension of the city's street railway system. The details of the controversy are not of general interest; but one of the suggestions of a local committee in favor of the extension of the street railway line, involves an important economic question of general application, and, therefore, worth attention.

IN considering the cost of the street railway extension the local committee bases its estimates on the cost of second-hand equipment, which can be obtained at the present time. It fails to take into consideration the cost of continuous operation.

This difference between the cost of temporary and continuous operation is pointed out by Edgar Dow Gilman, Director of the Department of public utilities in Cincinnati, in a recent report submitted to the council.

The Director declares that the committee made a fundamental error in estimating the capital which would be needed for a continuing business. The committee reported that an old street car could be purchased at a price which, with the cost of changing the gauge, would require an expenditure of only \$5,300. Director Gilman, in commenting on this, says:

"This amount is then assumed to be the capital required for one street car. But what happens? This car is already old; its life is relatively short. The time will soon come when it has to be replaced. The people of these communities will not be willing to have the new company go into the second-hand street car market for such replacement. They will rightfully demand and expect new, modern, adequate equipment. When such replacement occurs, the difference between the \$5,300 already capitalized and the cost of such new equipment is immediately added to the capital, which then becomes equal to the cost of a new car."

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DIRECTOR Gilman then declares that if the street railway company could get an old car for nothing, and the reasoning of the Committee's report were followed, this would mean that no depreciation would be set up and that it would be assumed to be unnecessary for all time to figure interest or depreciation as a part of operating cost. The Director continues:

"In other words, the \$5,300 the report would have the committee consider as sufficient capital for continued operation, is for a temporary period only. If the service were to end when this car was worn out, or, if continued, were to be continued always by second-hand equipment, the reasoning used would be correct. But such premises are not true. In a continuing business the necessary capital must be figured at current prices, because within a relatively short time, that is what the capital will amount to, no matter by what expediency it may be temporarily deferred.

"It is said that a large proportion of the business enterprises which are started fail, chiefly because of fallacious methods of figuring costs. We have seen in the bus operations in Cincinnati the direct result of improperly determining costs of doing business. In 1925-26 there were many independent operators with high hopes, and with no apprehensions disclosed by their methods of computing costs or figuring the amount of capital necessary to continue indefinitely in business. In 1927-28 bankruptcy and receivership forced them out of business with the loss of their life-time savings."

DIRECTOR Gilman declared that this principle applies to the computation of capital on roadway overhead and substation. The figures

given by the committee, he says, represent the expenditures of today. They offer a basis of computing the interest required on today's investment, but they do not offer a proper basis for setting up depreciation on today's operations; nor do they show the capital required and the cost of such capital in interest and sinking fund or depreciation tomorrow and for all the tomorrows thereafter. He significantly adds:

"Whatever price the Cincinnati Street Railway Company may pay now for the second-hand equipment, the city, through the routine work of the Director of Public Utilities, would shortly be required to approve expenditures, raising the capitalization to the then current prices of new equipment."

The fact is that continuous cost of operation cannot be safely estimated on the basis of the cost of second-hand equipment to start with, or on the cost of a plant purchased at a bargain. In the long run expenses of operation must be figured on present costs of new equipment. Utility service is a continuous service. It does not consist of a single transaction.

THE probability is that the hopes of the people of Detroit as to cheap street railway fares will be shattered in time. They took over the street railway system at a bargain price; but continued operation cannot be based on the original bargain price capitalization. Some indication of this already appears in newspaper reports of the street railway situation in that city. John H. Morgan, auditor for the municipally owned lines has stated that the system cannot keep pace with the growth of the city on

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the present revenue, because, he declares, the earnings are insufficient. According to a statement in the *Detroit Free Press*:

"That the fare of the Detroit Street Railway has been too low to provide for track rehabilitation from revenue received; that insufficient funds are available for purchase of new equipment; and that better service can only be obtained through refinancing has been known to executives of the system for several months, if not years. But yesterday was the first time that any official has publicly admitted these conditions, although several years ago charges were made that the financial statements issued monthly did not present a true picture of the condition of the lines."

The present fare on the Detroit Railways is 6 cents, while the fare is 8 cents or over in more than 400 cities in the United States in which the railways are privately owned. Whether this difference is due to more economical operation by the municipally

owned, or is due to an improper basis of figuring the cost of continuous operation, time will tell.

DIRECTOR Gilman, however, is right as to the economic principle stated. In the long run costs must be figured on continuous operation, not on temporary operation.

This principle tends to minimize, somewhat, the importance of the controversy over the present value and investment theories of rate making. As operation continues, present plant value and actual cash investment tend to approach each other. If annual depreciation is based on the cost of the original plant, then when the time comes for replacement, additional capital must be advanced, if the cost of replacement is more than the cost of the original plant; and at that time actual cash investment and present value measured by replacement cost will be the same. This principle works the same if values fall.

Must Exhaust State Remedies Before Calling for Federal Relief

THE Supreme Court of the United States has ruled that it is necessary for a utility company that seeks relief from the Federal court prior to exhausting the appellate remedies provided by a state, to show that the state has taken or is about to take some improper action likely to result in confiscation, unreasonable hardship or delay. As a general rule a utility is required to exhaust state remedies before Federal courts will grant injunctive relief, and the Supreme Court pointed out that a utility required by a state law to apply to the local Commission for rate relief before resorting to the Federal courts cannot, after making this application, defeat orderly action thereon by alleging an intent to deny relief sought.

What Others Think

Experiments With Government-Operated Railroads

DR. Walter M. W. Splawn's "Government Ownership and Operation of Railroads" is an attempt at an impartial and nontechnical comparison of the two systems of publicly owned and operated railroads and of privately owned and governmentally regulated railroads.

The first seventeen chapters deal with the development of different railroad systems throughout the world. Where the information was available the author shows the historical development of the different systems step by step.

In addition to presenting good historical and statistical accounts of the railroads in France, Germany, Italy, England, Canada, and others of the leading systems of the world, the author discusses the railroads of the lesser states, the newly created states of Europe, African possessions, Asia, South and Central America, Mexico, and several others. He differentiates the problems that confront railroads in countries with an autocratic form of government from those in countries with a more democratic government. He also shows that some railroads are the result of politics, some are built for military purposes and some for their more proper economic function of commercial transportation.

With this information for a background he takes up the arguments generally advanced for and against government ownership and operation of the railroads in the United States. The reader is warned against giving too much weight to the comparison of the results of government operation of railroads in foreign countries with the same situation in the United States. The commonest of such comparisons is that of the railroads of Germany prior to

the war with the railroads in the United States. Such a comparison can not give a true picture of the probable outcome of government ownership and operation in this country because of the great diversity of circumstances in the two countries.

The author then turns to the comparison of the successes and failures of the railroads while under government management in the United States with periods of equal length before and after the government took over control. The reviewer is of the opinion that the experiences during the period of Federal control does not prove a case for or against government ownership and operation due to the abnormal conditions of the times. The comparison of the records of most industries during the same period with the subsequent or preceding records would probably show equally astonishing results.

The question of regulation of railroads by the government is included in Chapter XVI, dealing with the expansion and development of railroads in the United States. The author shows how our regulatory measures have been adopted from time to time as an effort on the part of the government to correct the evils of unregulated competition of railroads. The aim of such was to protect the best interests of the public. At best, they have been of an experimental nature of which we probably have not as yet seen the end.

Pages 447 to 463 are devoted to appendices offering statistical information on the railroads of the new Baltic states, and such information as was available on the Siberian railroad.

The book constitutes one of the most concise and comprehensive collections of railroad information and statistics in

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the English language that the reviewer is acquainted with.

—JOHN W. BOATWRIGHT.

GOVERNMENT OWNERSHIP AND OPERATION OF RAILROADS. By Prof. Walter M. W. Splawn. 8vo. New York: The Macmillan Company. 478 pages. 1928. \$5.00.

Some Striking Changes in the Capital Structures of Electric Utilities

IN a pamphlet, "Recent Growth of the Electric Light and Power Industry," by Charles O. Hardy, issued by the Brookings Institution, Washington, D. C., there is an interesting consideration of changes in the capital structures of electric companies. A large number of reports were received from companies on this subject, and the author has this to say with reference to financial structures:

"The most striking change in the capital structure is the extent to which preferred stock has replaced common stock in the hands of the public. In 1920 common stock made up 28.6 per cent of the outstanding capitalization; on September 30, 1927, the corresponding percentage was 19.8. On the other hand, preferred stock has shown an increase in every year, rising from 13 per cent of the total capitalization in 1920 to 27.4 per cent in 1927. Mortgage bonds of operating companies, the largest single group of securities, have fluctuated from 40.5 to 46 per cent with no pronounced trend either upward or downward.

"These figures suggest, but do not prove, a tendency toward the concentration of control in the hands of a smaller proportion of the security holders. Theoretically, the reduction of the common stock interest from 28 per cent to 20 per cent means that it is sufficient for the controlling interests to own a relatively smaller investment in order to be sure of their permanence in the management. As a practical matter, however, the point is of little importance. Control is always exercised, in a large corporation, whose securities are widely scattered, by a comparatively small number of people, and frequently the controlling group owes its position to the fact of its being entrenched in the official management quite as much as to its ownership of voting stock. The reduction which has occurred in the proportion of capital in the form of common stock is presumably of some assistance to the management in protecting itself against possible attacks on its position, but its significance from this standpoint cannot be great.

"Moreover, it should be remembered that

the proportion of common stock to the total amount of stock and funded debt is not a fair measure of the extent to which the common stockholder actually is furnishing the capital. Surplus is an important item in the financial structure, and surplus is really part of the common stockholder's investment. Data on surplus were not called for in our questionnaire, but for purposes of comparison we have prepared from Poor's Manual the accompanying table, which relates to approximately the same list of companies. The average ratio is 27.3 per cent, but the range of variation is so great that the average has little significance.

"The reduction of the proportion of common stock has made possible a higher rate of return on the common stock. More important than the effect of the decreased percentage of the voting stock on the location of control, in all probability, is the effect of the thinning down of the common stock equity on the distribution of income. So long as the average rate of return on the entire capital is higher than the cost of borrowed capital (including preferred stock issues as borrowings), a decree in the proportion of common stock will increase the rate of the return on that stock. This is a partial explanation of the improved financial showing of the common stock, which is brought out by data presented in a later section.

"Of course, the good showing for common stock which results from the practice of operating on a thinner equity involves the taking of correspondingly larger risks. The past eight years have on the whole been a period of prosperity for public utilities, a situation which has encouraged the thinning of equities and has given larger profits to those who have adopted this policy. If a period comes when the expenses creep up on income, bond interest and cumulative preferred stock dividends will not shrink with shrinking earnings and any losses which may occur will be concentrated on thinner slices of common stock."

—D. L.

RECENT GROWTH OF THE ELECTRIC LIGHT AND POWER INDUSTRY. By Charles O. Hardy. 8vo. Washington, D. C.: The Brookings Institution. 60 pages. 1929. 50 cents.

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The legal aspects of gas franchises summarized.

ONTARIO'S "HYDRO"—DRASTIC AND ELUSIVE VENTURE IN GOVERNMENT ECONOMICS. By W. M. Carpenter. *Annalist*; No. 33; pp. 229-231. 1929.
Operating policies and economic aspects of the service in Ontario.

PUBLIC UTILITY FINANCING FOR 1928. By Peter Leininger. *Journal of Land and Public Utility Economics*; No. 5; pp. 200-203. 1929.

Summary statistics showing type, volume, and cost of capital.

THE SUPREME COURT AND COMMERCE BY MOTOR VEHICLE. By Charles P. Light. *North Carolina Law Review*; No. 7; pp. 268-285. 1929.

The motor vehicle and interstate commerce; right obligations and governmental powers to regulate.

THE REGULATION OF PUBLIC UTILITY HOLDING COMPANIES. By David E. Lilienthal. *Columbia Law Review*; No. 29; pp. 404-440. 1929.

The legal and economic aspects of holding company regulation with extensive citations on the subject. The article covers:

- (1) How the situation developed.
- (2) Nature and functions of a holding company.
- (3) Types of control.
- (4) History and status of direct control.
- (5) History and status of indirect control.
- (6) A summary of present conditions and possible development.

THE REGULATION OF ELECTRIC LIGHT AND POWER UTILITIES. By C. O. Ruggles. *American Economic Review Supplement*; No. 19; pp. 179-196. 1929. The industries of the country are rapidly becoming dependent upon central electric stations. The possibilities of introducing economies and improving the service are very great. This calls for a regulatory policy which will reward management in accordance with the service rendered. Developments have been such that the State Commissions are no longer able to cope with the problems. Consequently Federal regulation with central and regional bodies organized with the goal of encouraging efficiency as well as regulating is necessary for continued progress in the industry.

FUNCTIONS OF A PUBLIC UTILITY STATISTICAL DEPARTMENT. By B. J. Sickler. *American Gas Journal*; No. 130; pp. 45, 46, March, 1929. General survey of duties and possibilities.

THE REGULATION OF THE COMMON CARRIER MOTOR VEHICLE WITH RESPECT TO ITS COMPETITIVE ASPECTS. By H. R. Trumbower. *American Economic Review Supplement*; No. 19; pp. 226-235. 1929. Need for comprehensive plans of regulating all transportation agencies.

The March of Events

Conflict of State and Interstate Rate Schedules

RESTRICTIONS upon the establishment of rate tariffs by State Commissions, by reason of the powers delegated to the Interstate Commerce Commission, have for some time occupied the attention of those interested in Commission regulation in the states. Notwithstanding the rule against intrastate railroad rates which discriminate against interstate traffic the Louisiana Commission refuses to believe that the Interstate Commission intends that a State Commission should be used as "a simple sheriff's office for the execution, instant, within the state of interstate rate orders. Two vital questions raised in a brief filed by Chairman Francis Williams of the Louisiana Public Service Commission in I. C. C. Docket No. 21632 et al. are:

Must the railroads present evidence of discrimination before the State Commissions in cases arising out of orders of the Interstate Commerce Commission finding state rates discriminatory, but referring the carriers back to the State Commissions affected

for such readjustment of the intrastate rates as may be required to remove undue prejudice? Should the Interstate Commerce Commission find proper the present method insisted upon by the carriers of offering only the Interstate Commerce Commission orders finding discrimination, without making a full and adequate showing of such discrimination before the State Commission?

The case mentioned deals with the question of discrimination in Louisiana intrastate rates growing out of exceptions made by the Louisiana Commission to the rates, rules, and regulations fixed by the Interstate Commerce Commission in the Consolidated Southwestern Cases, Docket 13535 et al.

The points raised by the State Commission in its brief are of extreme importance to all State Commissions. If the contention of the carriers is maintained, it is argued that the State Commissions will be so reduced in power, authority, and dignity as to make it imperatively necessary for the preservation of reasonable control by the states of state rail rates, that an appeal to Congress be made for a radical amendment of § 13 of the Interstate Commerce Act.



Alabama

General Rate Investigation

THE Commission on May 7th ordered a general investigation of the rates of the Alabama Power Company and set the matter for hearing in Montgomery on June 11th. This is supplementary to an investigation started by a citation on April 10th into the commercial electric service. It may involve a further adjustment in rates for residential service, although it is not contemplated that any further substantial revision of these rates will be found necessary.

On the same day a supplementary order was issued in the Commission's investigation into the history and development of the power company's properties and the original cost and the reasonable cost of its operations under honest, efficient, and economical management. In the latter case, in which several hearings have been held, the Commission ordered the report of its chief engineer and

a memorandum of the power company filed as a part of the record and gave notice that both were open to the public.

The Commission recently revised the rates for residential service after several months' extensive investigation and study, but it deemed that the public interest required an investigation of all rates of the company for the purpose of revising such rates to such an extent as is found to be just and reasonable. The Commission takes the position that rates are related and, generally speaking, should be reasonably co-ordinated.

The city of Mobile is particularly interested in these proceedings. It has been objecting before the Commission to a 20 per cent additional charge for direct current for commercial purposes. It has been indicated that the city is not content to permit its commercial rate complaint to be held in abeyance until the Commission takes up and acts on this class of rates generally.



Refund Claim Against Power Company

THE city of Mobile, as a municipal corporation, on May 9th filed suit in circuit court for the recovery of more than \$10,000 from the Alabama Power Company, based on a claim that the wrong schedules had been applied for service to the city; also a complaint against the method of billing followed by the company in charging for current used for municipal purposes; and a complaint questioning the validity of an order of the Commission of March 11, 1921, establishing higher rates to supersede the rates

contained in a contract entered into in 1906 between the municipality and the Mobile Electric Company, whose properties subsequently were merged with the power company.

An appeal was taken early this month in another refund test case against the power company from a decision in the inferior civil court, where the power company won the first skirmish. This suit also involved the applicability to Mobile in 1928 of the so-called Montgomery rate schedule, a system of rates decidedly better from the consumers' viewpoint than those applied by the utility. A private individual was the plaintiff in this suit.



California

Benefits from Rate Revision

WHETHER a revision of natural gas rates of the Pacific Gas & Electric Company amounts to a decrease or an increase is the question which has been argued recently in San Francisco. The proposed schedule would become effective in August or September on arrival of the natural gas from the fields in Fresno and Kern counties. Natural gas will be mixed with the manufactured gas now being used.

It has been pointed out by Dion R. Holm, acting city attorney, and M. Randall Ellis, city rate expert of San Francisco, that the new rates would increase the gas bills of 110,000 consumers, or approximately 60 per cent of all gas users in the city. The increase, they say, would run as high as 20 per cent of the present rate in some cases and would result in almost every consumer paying from 25 to 40 cents more during each month.

The president of the company, A. F.

Hockenbeamer, however, says that no consumer whose bill is now over \$2 a month will have higher bills under the proposed schedule, while those whose bills are less than \$2 a month will face an increase ranging from 2 cents up to 35 cents in one month. He states that the great majority of the consumers will be benefited and the home owner will receive the maximum benefit.

At the same time Mr. Hockenbeamer laid particular stress on the industrial advantages which San Francisco will gain through a natural gas supply. A change to mixed gas, he has pointed out, would result in a heat value of 700 B.T.U. as compared with the present 550 B.T.U. He continued:

"The average home in San Francisco uses about 5000 cubic feet of gas a month for cooking and water heating. For this consumption the present bill is \$4.50 and under the proposed schedules the charge for the equivalent of gas will be \$3.86, a reduction of 64 cents or 14 per cent."



Congressional Probe Asked

THE Senate and Assembly have adopted a resolution which calls for investigation by Congress of the telephone situation in the United States. This was the so-called Inman resolution, but it was passed in a modified form based upon views of the Commission.

It asked that Congress shall investigate relations between telephone companies and subsidiaries to determine if a monopoly exists in telephone service or in the selling of telephone equipment and supplies throughout the United States.

Commissioner Thomas S. Louttit is reported as saying that the only way to ascer-

tain the conditions as to the American Telephone & Telegraph Company in its interstate business is by way of the United States Government. Commissioner Clyde L. Seavey is reported as saying that a Federal Government investigation was favored by the Commission and that so far as the Railroad Commission was concerned with rate hearings, it could complete its own investigations only up to the limits of its jurisdiction.

Senator Tom West, of Alameda, it is reported, characterized it as "an idle gesture, originally designed to help out Senator Johnson and now, in its revised form, intended to make the people believe something is being done for them."

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District of Columbia

Inaccuracy of Meters

PERMISSION to substitute new types of meters for those which have been installed and used heretofore has been asked of the Public Utilities Commission by the Potomac Electric Power Company.

The company, it is said, will be ordered by the Commission to file reports showing details of improper registering by meters

now in use. The law permits a variation of from 2 per cent slow to 4 per cent fast, but it is reported that Commission officials believe the fast limit should be 2 per cent.

Change in the method of reporting inaccurate meters, says the *Washington Post*, also is contemplated by the Commission, which wants the company to show just how many meters register fast and how many slow and how much each way.



Commission Appointments

PRESIDENT Hoover has appointed Harleigh H. Hartman and General Mason M. Patrick members of the Public Utilities Commission, the first to succeed Commissioner Brand, whose term lately expired, and the latter to succeed Chairman Childress, who

has resigned. Mr. Hartman was formerly with the Illinois Commission, later an attorney in the Bureau of Valuation of the Interstate Commerce Commission, and since 1924 has been engaged in private practice in Washington. General Patrick was, until his retirement in 1927, Chief of the Army Air Corps.



Illinois

Appropriation for Phone Fight

THE Chicago city council on May 15th voted \$150,000 to the corporation counsel to finance litigation in the Federal Court against the Illinois Bell Telephone Company, and \$50,000 to its committee on gas, oil and electricity to continue its negotiations with the same company for a new franchise. Corporation counsel Samuel A. Ettelson had requested an appropriation of approximate-

ly \$250,000 to carry through the litigation.

There was bitter opposition by a small minority which contended that approximately \$2,000,000 has been spent by the city since 1920 in public utility litigation which had for its purpose the return of money to the city, but which had been futile. A tentative set-up which was submitted, showing real estate valuations, attorneys, and engineers paid at the rate of \$100 and \$50 a day was attacked.



Phone Rate Hearing

THE presentation of testimony by attorneys for the Illinois Bell Telephone Company in the rate controversy before Federal Judge James H. Wilkerson was completed on May 10th. Witnesses for the city, which is an intervening petitioner in the hearing seeking to make permanent a temporary injunction restraining the Commission from enforcing a lower telephone rate, started their testimony on May 14th.

Bernard E. Sunny, chairman of the board of the Illinois Bell Telephone Company, was called as the first witness. He testified in regard to the relations with the American Telephone & Telegraph Company that while the parent company owns in excess of 98 per cent of the stock in the Illinois Bell, and has been furnishing engineering and accounting services to it, the American Company has reduced its charges for that service from $4\frac{1}{2}$ per cent to $1\frac{1}{2}$ per cent in the last five years.



Indiana

Rehearing Asked in Water Rate Case

A PETITION for a rehearing, by the United States Circuit Court of Appeals, of the

Vincennes Water Supply Company rate case was filed by attorneys for the city of Vincennes and for the Commission on May 8th. The valuation is alleged to be excessive.

The Commission had fixed the valuation

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of the company's property at \$725,000. This was approved by the Federal District Court, but the Circuit Court of Appeals computed the property value at \$1,032,000.

The petition alleges, among other grounds, that the court erred in using the mean average of all engineers' estimates of value introduced in the hearing; that the court reasonably could have taken into account the fact that the property in 1921 was valued at \$440,000 by the Commission, and that not

more than \$100,000 of additions and betterments had been made to the property since that time; that the purchase price was less than \$500,000; and that tax board assessments of nearly the same figure bore on the final value.

Complaint is also made against the method of computing going value, and it is alleged that in arriving at the value certain conclusions were not supported by credible evidence in the case.



Commission Appointments

HONORABLE John W. McCardle has been appointed by Governor Leslie to succeed himself as a member of the Commission.

Governor Leslie has also appointed Honorable Jere West to succeed Commissioner Harmon, whose term has just expired. Commissioner West is a veteran jurist. He was a judge of the circuit court since 1897.



Louisiana

Telephone Rate Probe

COMMISSIONER Harvey G. Fields on May 7th completed the taking of testimony in the suit by the city to secure a decrease in exchange rates for South Highlands and Cedar Grove users to the level enjoyed within the old limits of Shreveport, and also in the case involving an application by the Southern Bell Telephone Company for an upward readjustment in all exchange rates, both of which cases were consolidated for the purpose of taking testimony. Briefs were to be submitted to the Commissioner within the next thirty days.

The city contended that fairness demanded a decrease in the South Highlands and Cedar

Grove rates which were established before the two suburbs were annexed by the city. The company contended that an increase in both residential and business telephone rates in Shreveport was necessary to provide a fair return on its local investment.

The company introduced figures to show that its return during the past four years had not been above 2 per cent, while the city attacked this testimony and offered the books of the company to show that the return had been above 6 per cent with the inclusion of returns from the long distance service.

It was contended by the company that the long distance revenues should not be figured into the totals.



Maine

Right of Eminent Domain for Power Companies

THE Maine State Grange has been circulating petitions invoking a referendum on an act passed by the last legislature granting the right of eminent domain to electric power companies doing a public utility business. It is urged that the measure would result in farms being overrun with dangerous high-tension lines.

The eminent domain act is characterized as "unfair and unjust to the rural people." The petitions have been sent to grange officials and leaders in an effort to secure the 10,000 signatures required by the Constitution to invoke a referendum.

This new law grants the right of eminent domain only when necessary for the location of transmission lines carrying 5000 volts or more and provides that the right shall not apply to lands or easements located within 300 feet of any inhabited dwelling; on or adjacent to any developed water power; or so closely parallel to existing lines of other utility corporations that the proposed transmission lines would interfere with the service rendered by the former. All such locations taken under the act must be approved by the Commission.

The electric companies argue that other utilities such as railroad and telephone companies may exercise the right of eminent domain and that it is only just that they should have the same right.

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Attack on Electric Rates

A MODIFICATION of the rates charged by the Androscoggin Electric Company is sought in a petition recently filed with the Public Utilities Commission. The present rates are alleged to be excessive, to both the domestic and power users.

A new rate schedule effective June 1st, which will reduce the cost of electricity to patrons about \$75,000 a year, was filed by the company on April 18th but the petition ignores this fact.

It is said that the new rate schedules would affect 98 per cent of the patrons of the utility company.



Maryland

Commission Appointments

HONORABLE William Cabell Bruce, formerly United States Senator, has been appointed by Governor Ritchie as general counsel of the Commission. He occupied this office

prior to his election to the Senate. Governor Ritchie has also appointed John H. Lewin, one-time assistant city solicitor of Baltimore, as people's counsel to succeed Thomas J. Tingley, who has recently resigned from the Commission.



Power War

THE Commission on May 7th held a rehearing in the power war between the Baltimore Consolidated Gas, Electric Light & Power Company and the Suburban Power Company over the question of which company should have the privilege of running its lines into Calvert county.

Both companies claim a franchise to serve the county. The Suburban Power Company was granted a franchise for this county and

for other southern Maryland counties by the Commission. After this company had expended more than \$200,000 in construction work the Baltimore company applied for and received a franchise to extend its power line into Calvert county.

The Suburban Power Company immediately halted all its work and called for a showdown. The Commissioners of Calvert county, opposing the franchise granted the Baltimore Company, refused that company permission to run its lines over the roads.



Massachusetts

Lower Rates in Worcester

A 5-CENT rate for domestic and commercial users of electricity, retroactive to May 1st, went into effect on May 8th following the acquisition of the Worcester Electric Light Company by the New England Power Association and the ending of litigation in Federal Court relating to electric rates.

A refund of nearly \$700,000 which was held back by the utility pending the decision in its case against the Department of Public

Utilities was to be carried through as quickly as possible. With more than 50,000 accounts to be reckoned and settled, it was predicted that some little time would elapse before all payments were made.

A revised schedule of gas rates for a few large industrial consumers was filed with the Department of Public Utilities on May 11th. It runs from 13 cents per 100 cubic feet for the first 25,000 cubic feet down to 5.5 cents per 100 for all over 2,000,000 a month. The rate differs from the old only after the first 1,000,000 cubic feet a month.



Missouri

Terminable Permit Bill Passed

A BILL authorizing common carriers to surrender their term franchises and receive from the Commission a terminable permit

with the consent of the city was passed on May 17th by the Senate. By voting down 13 amendments which had been offered, the return of the bill to the House for concurrence was avoided. St. Louis county was

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exempted from the terms of this new bill.

The Senate also passed the enabling act authorizing St. Louis to proceed with the construction of a rapid transit system of transportation. This bill, however, was amended so as to apply only to cities of more than 600,000, which makes it effective only in St. Louis. The amendment made it necessary for its return to the House for concurrence.

Under the provisions of the terminable permit bill a common carrier in St. Louis may make application for the surrender of its franchise and receive in return a permit which shall remain in effect so long as the

operating company complies with the regulations and restrictions under which it is granted. The city must give its consent before the Commission is authorized to grant such a permit.

Sponsors of the program, it is said, bitterly opposed the exclusion of the county but were unable to get the measure through the legislature with this provision. They had contended that it would work a hardship on a transportation line to operate under such a permit only as far as the city limits and be compelled to operate the remainder of the property under some other arrangement.



New Jersey

Delicatessen Gas Consumption

CHANGING social conditions, more delicatessen meals, less home washing and more outside laundry, the increasing tendency to live in apartment houses where there are fewer or no gas appliances, and more money for gasoline than gas, it is reported in the *Hoboken Observer*, are some of the reasons the Public Service Gas Company put forward as a basis for a gas rate revision.

The testimony of Percy S. Young, vice-president in charge of finance of the Public Service Gas Company, at the hearing on May 20th, was to the effect that with the domestic consumption of gas decreasing, the schedule now in effect is hampering the company's program of business expansion, and he claimed that economically the company was entitled to a reasonable return.

"We want to induce smaller gas users to make greater use of gas instead of spending money on luxuries," he declared.

"Gas rather than gasoline," interjected John J. Treacy, counsel for the municipalities which are fighting the gas rate revision.

The question of apportioning the cost of gas service between customers was an important subject of the testimony given by Adolph Luick at a hearing on May 13th. Mr. Luick testified that various items in his report to the Commission were placed under customer costs, production costs, or distribution costs according to his own judgment rather than by absolute and fixed computations. He declared that it would be impracticable to attempt to charge customers strictly on a basis of theoretical cost of service.

The witness explained that he did not think that a company would want a schedule based on the theoretical cost as it would entail three meters and much bookkeeping. One meter would be needed for quantity used, another to show the hourly average use, and another for the maximum demand during the twenty-four hours of the day.



New York

Light's Golden Jubilee

BLAZING with light and in carnival attire, Niagara Falls will stage the first civic celebration of Light's Golden Jubilee on June 13, 14, and 15, following the National Electric Light Association Convention in Atlantic City. The affair assumes an international aspect, for Niagara Falls, Ontario, has an equal part with Niagara Falls, New York, in the celebration.

The dedication of the municipal airport, parades and pageants, fireworks, a public audience by Queen Electra and her court,

illumination of the falls and sky by the 1,300,000 candlepower searchlights, and many other special features are expected to make this a memorable occasion.

Turning back the pages of history fifty years, the city will reproduce the first generation of electricity from the waters of Niagara. A replica of the "dynamo" used in 1879 will be in operation, and sixteen old style arc lamps, some of them the original lights, will illuminate Prospect Park. The ceremony connected with the starting of this dynamo, fifty years ago, will also be re-enacted.

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State-Wide Gas Probe

HEARINGS in the state-wide inquiry into uniform rate schedules for gas and electricity were continued on May 14th before Chairman William A. Prendergast of the Public Service Commission. William J. Welch, president of the New York & Richmond Gas Company, and Colonel Oscar H. Fogg, vice-president of the Consolidated Gas Company, testified.

Mr. Welch's testimony was to the effect that new rates had been decided upon at the

demand of large users of gas since otherwise manufacturers and others would have changed their fuel. He defended the rates on the ground that the middle group was being charged a fairer and more equitable rate and that the class of smallest users of gas were not paying enough to make the service compensatory.

Colonel Fogg testified that he favored the initial charge because it was sounder business ethics and would make the small users of gas pay their way. The hearing was adjourned subject to call.

Buffalo Gas Rates

HEARINGS were continued during the month of May on the application before the Public Service Commission for an increase in the rates of the Iroquois Gas Corporation at Buffalo. The utility had asked for a minimum charge of \$2 a month, to include the first thousand cubic feet of gas, and 65 cents a thousand for all gas consumed above the first thousand cubic feet.

On May 9th an alternative plan was suggested under which there would be a minimum charge of \$1 for the first thousand cubic feet of gas or less and \$1 a thousand for the next four thousand cubic feet and 65 cents a thousand for quantities above

the first five thousand and up to fifty thousand cubic feet. For quantities in excess of fifty thousand cubic feet the rate asked is 60 cents a thousand.

Much of the testimony involves the question of the amount of natural gas available, on which issue there were several experts presented.

A controversy arose on the question whether the utility was attempting to collect a \$1.15 service charge in violation of a state law prohibiting service charges. Attorneys for the company denied that any service charge was being sought. It was brought out that there was no intention to make a charge to customers where no gas at all was used. The making of such a charge is one of the usual features of a service charge.

Tax Reports In Rate Valuation

ONE of the interesting features of the proceedings before the Commission in the rate case brought by the city of Utica and others against the Utica Gas & Electric Company was a ruling that tax reports made to the State Tax Commission are available

for the information of the complainants.

The complainants admitted that the law provides one basis of valuation for tax reports and another for fixing rates, but they believed the tax reports would shed light on the situation and prove interesting when compared with the recently submitted valuations.

North Carolina

Higher Phone Rates Proposed

THE Southern Bell Telephone Company has announced an increase in telephone rates for the Asheville area, effective June 21st. R. N. Pfaff, district manager, has stated that the low net return and great expenditures involved in a large expansion program made the upward rate revision necessary.

The rate increases are subject to the approval of the Commission and formal appli-

cation for the increase was to be made. Mr. Pfaff stated in part:

"The present telephone rates were established February 1, 1919 when there were 4,412 telephones connected with the Asheville exchange. There are now more than 13,060 telephones connected, an increase of approximately 300 per cent during the past ten years.

"The per cent of net return to the average investment in Asheville for the year 1927 equalled only .89 per cent. The average in-

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vestment during the year 1928 was \$1,798,618.42, and the net return on the actual investment was only .78 per cent.

"Our company estimates that with the present rates in force the operating costs

during 1928 will exceed the revenues by \$8,870, resulting in a net deficit of .45 per cent. It is estimated that for the year 1930 the operating costs will exceed the income by \$32,161."

Ohio

Dayton Gas Rates

MEMBERS of the gas rate commission recently appointed in the city of Dayton to investigate the rates of the Northwestern Ohio Natural Gas Company have received statements by the utility indicating that the company had a loss of \$280,000 for the fiscal year ending March 31, 1928. These statements, along with other figures submitted by

the utility company, will now be examined.

The gas company declares that it is forced to pay 54 cents a 1000 cubic feet for natural gas delivered at Toledo. The company reports that it paid \$3,200,000 for gas furnished during the past year.

It is believed, says the *Toledo Blade*, that an amicable settlement can be reached and the recommendation of the commission submitted to the council for final action.

Pennsylvania

Lower Electric Rates in Philadelphia

THE Philadelphia Electric Company on May 18th announced a cut in its rates which would save approximately \$900,000 a year to householders in Philadelphia and a section of Delaware county.

The reduction is made in the second step. The existing charge under this step is 7 cents a kilowatt hour, while under the new rate the charge will be 6 cents.

The second step goes into effect after the first twelve kilowatts, which are paid for at the rate of 8 cents a kilowatt. It is stated that 92 per cent of the domestic consumers will benefit by the rate reduction and that consumers' bills will be cut approximately 14 per cent.

"Like all reductions in the cost to the consumer of the service of a public utility," William H. Taylor, president of the Philadelphia Electric Company, is quoted in the *Philadelphia Inquirer* as saying, "our new rate schedule is the result of months of in-

vestigation by our rate experts, backed up by other departments of the company.

"Part of this work included an examination of more than 1,000,000 bills of our domestic consumers, and making a careful study of general power consumption in every section of Philadelphia and part of the outlying district.

"Rate reductions, as well posted persons are aware, are not made over night. They are the results of careful studies of all costs.

"Our hydroelectric development at Conowingo, Maryland, has been in operation since March 1, 1928. Studies of that operation and the distribution of electrical energy have been thoroughly made from every phase of the power system, from production to consumption.

"Cheaper electricity in the home will naturally encourage increased use of current. Sale of more current means greater volume of business for the company; greater volume of business means decreased costs, and decreased cost will mean that as time goes along our customers will benefit by further reductions in the price of electricity."

\$200,000 to Fight Rates

THE cost of battling the rate increase of the Scranton-Spring Brook Water Service Company will probably reach a total of \$200,000, according to an estimate by city solicitor C. B. Little, reported in the *Scranton Times*. Mr. Little has been trying to secure co-operation by the various forces

arrayed against the company to raise the necessary fund.

Several of the municipalities which pledged themselves to pay in certain money, says Mr. Little, have so far utterly failed to make any contribution whatever. A contribution by the Old Forge School District was likely to be withheld because of an opinion by the solicitor for the school board that the school

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code gave it no authority to make any such expenditure.

A decision in the case is not expected for several months as there is still considerable

evidence to be introduced and the utility's attorneys are to cross-examine engineering witnesses, and this will probably be followed by rebuttal evidence.



Erie Telephone Rates

IT is the opinion of city solicitor Jacob Held, of Erie, that 98 per cent of all the people are heartily with the city officials in a fight for lower telephone rates, says the *Erie Dispatch*.

This surprising statement that subscribers

prefer to pay lower rates was brought out in an interview with Mr. Held concerning the application of the city of Erie to have the rates of the Municipal Telephone Company reduced.

Mr. Held thought that he would be ready to present his case to the Commission in September.



South Carolina

Power Rate Probe

THE committee appointed at the 1929 session of the legislature, under the terms of a concurrent resolution, to conduct an investigation to determine whether or not it would be wise to have an investigation of rates of power companies in South Carolina, met on May 8th at the offices of

the Railroad Commission and perfected its organization.

Members of the committee are W. L. Riley from the Senate, H. C. Bowman from the House, L. M. Cantrell appointed by the Governor, and T. H. Tatum appointed from the Railroad Commission. Mr. Tatum was elected chairman and Mr. Bowman was elected secretary.



New Gas Company

THE South Carolina Public Service Company, a subsidiary of the Central Public Service Corporation, on May 1st took over from the South Carolina Power Company its gas manufacturing plant and the responsibilities for its distribution. The sale of the gas properties to the new company was entered into in March by the directors, and at a meeting of stockholders the sale of

these properties was formally confirmed.

The power company, it is reported, will give its attention in the future altogether to the generation and distribution of electric power. The Central Public Service Corporation now operates over an extensive area in the United States, going as far west as Kansas and in the Dominion of Canada as well. Its officials have expressed satisfaction at entering the field in Charleston and are looking forward to an era of prosperity.



Wisconsin

Busses to Replace Street Cars

THE street car system in the city of Janesville will soon pass out of existence, it is reported in the *Janesville Daily Gazette*. Establishment of a complete bus service, serving all parts of the city, replacing service by electric cars of the Janesville Traction Company, is expected to be made this summer as a result of negotiations now coming to a close between the street railway interests and the Wisconsin Power and Light Company.

Announcement has been made by W. H. Dougherty, legal counsel for the utility company, that the power and light company has offered \$20,000 for all of the property of the traction company, and that the offer has been accepted.

Approval of the plan by the city officials and the Railroad Commission was expected.

The purchase price is said to be practically for junk value, and stockholders will receive approximately 5.6 per cent of what has been invested in the company. Yearly deficits have been reported since before the war.

Public Utilities Reports

COMPRISING THE DECISIONS, ORDERS AND
RECOMMENDATIONS OF COURTS AND COMMISSIONS



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Q *These official reports are published annually, in their entirety, in five bound volumes, at the price of \$32.50 for the set. This price includes both the Annual Digest and a year's subscription to PUBLIC UTILITIES FORTNIGHTLY.*

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UNITED STATES SUPREME COURT.

ST. LOUIS & O'FALLON RAILWAY COMPANY

v.

UNITED STATES OF AMERICA et al.

(— U. S. —, — L. ed. —, — Sup. Ct. Rep. —.)

Appeal and review — Proper appellate court.

1. An appeal from a case brought to set aside or suspend an order of the Interstate Commerce Commission which is not merely for the payment of money may be properly made to the Supreme Court of the United States direct from the District Court by special provision of the Federal judicial code, p. 165.

Railroads — Single system.

2. A coal-carrying road nine miles long entirely within one state was held not to be under the common control and management as a single system with another railroad twelve miles long in another state, where all communications between the two properties were effected over the tracks of a terminal company, including a bridge over the Mississippi River, p. 166.

Orders — Interest on the amount of order.

3. Where a carrier has made a bona-fide denial of any excess earnings under circumstances sufficient to justify a contest, no interest for any time prior to a final order should be imposed by the Interstate Commerce Commission seeking to recapture excess earnings, p. 166.

Railroads — Recapture of excess earnings.

4. Excess earnings of a carrier are not recapturable unless and until the Interstate Commerce Commission has fixed a general level of rates intended to yield a fair return on the aggregate value of carrier property, either as a whole or in some prescribed rate or territorial group, p. 166.

Valuation — Elements to be considered — Recapture of excess earnings.

5. A Federal statute directing the Interstate Commerce Commission in determining values of railway property for purposes of recapturing excess earnings to "give due consideration to all the elements of value recognized by the law of the land for rate-making purposes," is an express command and the carrier has the right to demand compliance therewith to the extent that reproduction cost should be considered, p. 167.

Interstate Commerce Commission — Duty to follow Supreme Court — Rate-making values.

6. The Supreme Court of the United States in the exercise of its proper function has declared the law of the land concerning valuations for rate-making purposes and the Interstate Commerce Commission in disregarding the approved rule thereby fails to discharge the duty imposed upon it by Congress, p. 170.

Appeal and review — Proper question upon appeal — Recapture of excess earnings.

7. It is necessary on an appeal from an order of the Interstate Commerce Commission recapturing excess earnings by a carrier under authority of a Federal statute, for the court to determine whether or not the Commission acted as directed by Congress, regardless of whether or not the order permitted the carrier to retain sufficient income to escape actual confiscation, p. 170.

Valuation — Increased construction cost.

Statement that increased construction cost in rate-making valuations may not be more than offset by other elements affecting adversely the present value of the property involved, p. 174.

Valuation — Congressional intent — Elements of rate base.

Statement that it is inconceivable that Congress after rejecting property investment account as excessive, intended to make mandatory upon the Interstate Commerce Commission the consideration of elements which would give a valuation double that which had been rejected, p. 183.

(BRANDEIS, HOLMES, and STONE, JJ., dissent.)

[May 20, 1929.]

CROSS-APPEAL from the final decree of the United States District Court of Eastern Missouri, three judges sitting, in a suit to annul an Interstate Commerce Commission order directing the recapture of alleged excessive earnings of a railroad; decree of District Court and order of the Interstate Commerce Commission reversed. [For a discussion of the District Court decision, see 22 F. (2d) 980, P.U.R.1928A, 740.]

Mr. Justice McReynolds delivered the opinion of the Court.

These are cross appeals from the final decree of the District Court, Eastern Missouri,—three judges sitting—in a suit to annul an Interstate Commerce Commission order, dated February 15, 1927, 124 Inters. Com. Rep. 3, which directed St. Louis & O'Fallon Railway Company to place in a reserve fund one-half of its determined excess income for the years 1920 (ten months), 1921, 1922, and 1923 (that is half of the sum by which the net railway operating income for each of those years exceeded 6 per cent of the ascertained value of property devoted to public service); and to pay to the Commission the remaining one-half with 6 per cent interest beginning four months after termination of the year, i. e., May 1, 1921, 1922, 1923, and 1924. P.U.R.1929C.

Section 15a, added to the Interstate Commerce Act by Transportation Act, 1920, contains nineteen paragraphs. Of those specially important here, 1, 2, 3, 5, 7, and 8 are copied in the margin;¹ 4 and 6 follow:—

¹"Section 15a. (1) [This defines the terms employed.]

"(2) In the exercise of its power to prescribe just and reasonable rates the Commission shall initiate, modify, establish, or adjust such rates so that carriers as a whole (or as a whole in each of such rate groups or territories as the Commission may from time to time designate) will, under honest, efficient and economical management and reasonable expenditures for maintenance of way, structures and equipment, earn an aggregate annual net railway operating income equal, as nearly as may be, to a fair return upon the aggregate value of the railway property of such carriers held for and used in the service of transportation: *Provided*, That the Commission shall have reasonable latitude to modify or adjust any particular rate which it may find to be unjust or unreasonable, and to prescribe different rates for different sections of the country.

"(3) The Commission shall from time to time determine and make public what percentage of such aggregate property value constitutes a fair return thereon, and such percentage shall be uniform for all rate groups or territories which may be designated by the Commission. In making such determination it shall give due consideration, among other things, to the transportation needs of the country and the necessity (under honest, efficient, and economical management of existing transportation facilities) of enlarging such facilities in order to provide the people of the United States with adequate transportation: *Provided*, That during the two years beginning March 1, 1920, the Commission shall take as such fair return a sum equal to 5½ per centum, of such aggregate value, but may, in its discretion, add thereto a sum not exceeding one-half of one per centum of such aggregate value to make provision in whole or in part for improvements, betterments, or equipment, which, according to the accounting system prescribed by the Commission, are chargeable to capital account.

"(5) Inasmuch as it is impossible (without regulation and control in the interest of the commerce of the United States considered as a whole) to establish uniform rates upon competitive traffic which will adequately sustain all the carriers which are engaged in such traffic and which are indispensable to the communities to which they render the service of transportation, without enabling some of such carriers to receive a net railway operating income substantially and unreasonably in excess of a fair return upon the value of their railway property held for and used in the service of transportation, it is hereby declared that any carrier which receives such an income so in excess of a fair return, shall hold such part of the excess, as hereinafter prescribed, as trustee for, and shall pay it to, the United States.

"(7) For the purpose of paying dividends or interest on its stocks, bonds, or other securities, or rent for leased roads, a carrier may draw from the reserve fund established and maintained by it under the pro-P.U.R.1929C.

After an investigation instituted under § 15a, May 14, 1924, for the purpose of determining incomes received by St. Louis & O'Fallon Railway Company (the O'Fallon) and Manufacturers' Railway Company (the Manufacturers'), asserted to be parts

visions of this section to the extent that its net railway operating income for any year is less than a sum equal to 6 per centum of the value of the railway property held for and used by it in the service of transportation, determined as provided in paragraph (6); but such fund shall not be drawn upon for any other purpose.

"(8) Such reserve fund need not be accumulated and maintained by any carrier beyond a sum equal to 5 per centum of the value of its railway property determined as herein provided, and when such fund is so accumulated and maintained the portion of its excess income which the carrier is permitted to retain under paragraph (6) may be used by it for any lawful purpose."

"(4) For the purpose of this section, such aggregate value of the property of the carriers shall be determined by the Commission from time to time and as often as may be necessary. The Commission may utilize the results of its investigation under § 19a of this act, in so far as deemed by it available, and shall give due consideration to all the elements of value recognized by the law of the land for rate-making purposes, and shall give to the property investment account of the carriers only that consideration which, under such law, it is entitled to in establishing values for rate-making purposes. Whenever pursuant to § 19a of this act the value of the railway property of any carrier held for and used in the service of transportation has been finally ascertained, the value so ascertained shall be deemed by the Commission to be the value thereof for the purpose of determining such aggregate value."

"(6) If, under the provisions of this section, any carrier receives for any year a net railway operating income in excess of 6 per centum of the value of the railway property held for and used by it in the service of transportation, one-half of such excess shall be placed in a reserve fund established and maintained by such carrier, and the remaining one-half thereof shall, within the first four months following the close of the period for which such computation is made, be recoverable by and paid to the Commission for the purpose of establishing and maintaining a general railroad contingent fund as hereinafter described. For the purposes of this paragraph the value of the railway property and the net railway operating income of a group of carriers which the Commission finds are under common control and management and are operated as a single system, shall be computed for the system as a whole irrespective of the separate ownership and accounting returns of the various parts of such system. In the case of any carrier which has accepted the provisions of § 209 of this amendatory act the provisions of this paragraph shall not be applicable to the income for any period prior to September 1, 1920. The value of such railway property shall be determined by the Commission in the manner provided in paragraph (4)."

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of one system, for the years 1920-1923, the Commission found:—(1) Although the stock of both corporations was mostly owned by the Adolph Busch Estate and their principal officers were the same, they were not carriers operated under common control and management as a single system within paragraph 6. (2) The Manufacturers' had received no excess operating income. (3) The value of the O'Fallon's property devoted to public service in 1920 (ten months) was \$856,065; in 1921, \$875,360; in 1922, \$978,874; in 1923, \$997,236; and during each of those years it received net operative income exceeding 6 per cent upon the stated valuation.

The above-described recapture order followed.

[1] The cause is properly here under the Judicial Code, as amended by Act of February 13, 1925, (U. S. C., Title 28, § 345)—

"Sec. 238. A direct review by the Supreme Court of an interlocutory or final judgment or decree of a district court may be had where it is so provided in the following acts or parts of acts, and not otherwise: . . .

"(4) So much of 'An act making appropriations for the fiscal year 1913, and for other purposes,' approved October 22, 1913, as relates to the review of interlocutory and final judgments and decrees in suits to enforce, suspend, or set aside orders of the Interstate Commerce Commission other than for the payment of money. . . ."

The Act of October 22, 1913, (38 Stat. 219, 220) transferred to District Courts the jurisdiction granted to the Commerce Court by Act of June 18, 1910 (36 Stat. 539); and provided for review by this Court of causes embraced therein. The jurisdiction of the Commerce Court included—

"First, All cases for the enforcement, otherwise than by adjudication and collection of a forfeiture or penalty or by infliction of criminal punishment, of any order of the Interstate Commerce Commission other than for the payment of money.

"Second. Cases brought to enjoin, set aside, annul or suspend in whole or in part any order of the Interstate Commerce Commission. . . ."

Paragraph (4), § 238, applies to all those causes for-
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merly cognizable by the Commerce Court and reviewable here. The words "other than for the payment of money" were taken from clause first, Act of 1910, above quoted, and, as there, they delimit the trial court's jurisdiction. They do not inhibit review here of any cause formerly cognizable by the Commerce Court. Moreover, the order under consideration was not merely for payment of money; and the proceeding below was to set aside, not to enforce it.

Wisconsin R. Commission v. Chicago, B. & Q. R. Co. 257 U. S. 563, 66 L. ed. 371, P.U.R.1922C, 200, 42 Sup. Ct. Rep. 232, 22 A.L.R. 1086, and *Dayton-Goose Creek R. Co. v. United States*, 263 U. S. 456, 68 L. ed. 388, 44 Sup. Ct. Rep. 169, 33 A.L.R. 472, point out the general purpose of the Transportation Act, 1920, and uphold the validity of § 15a.

[2] The Manufacturers' is a switching road with 30 miles of track within St. Louis, Missouri. The O'Fallon—a coal-carrying road—has 9 miles of main line, all in Illinois, and this connects with the Terminal Railroad at East St. Louis. Through the latter deliveries are made to sundry points in St. Louis, some of which are on the Manufacturers' line. "The distance between the railroad of the O'Fallon and the railroad of the Manufacturers' is about 12 miles, and all communication by rail between the two properties is effected over the tracks of the Terminal, including a bridge over the Mississippi river." Both the Commission and the District Court held that the record failed to show these two roads were under common control and management and operated as a single system within the meaning of paragraph 6. We accept their conclusion.

[3] The Commission directed the O'Fallon to pay 6 per cent interest on the recaptured one-half of its ascertained excess net railway operating income beginning four months from the end of the year during which the excess accrued (§ 6). The District Court rightly ruled that as the carrier made bona fide denial of any excess under circumstances sufficient to justify a contest, no interest should have been imposed for any time prior to the final order. Not until then could the carrier know what, if anything, it should pay.

[4] Also, we think the District Court rightly rejected the P.U.R.1929C.

claim that excess earnings were not recapturable unless and until the Commission had fixed a general level of rates intended to yield fair return upon the aggregate value of carrier property either as a whole, or in some prescribed rate or territorial group. Congress, of course, realized that final valuations would require prodigious expenditure of time and effort; but the language concerning recapture indicates that prompt action was expected. Practical application of paragraphs 5 and 6 does not necessarily depend upon prior compliance with paragraphs 2 and 3. The act should be construed so as to carry out the legislative purpose. The proviso of paragraph 3 prescribing action to be taken during two years beginning March 1, 1920, and the clause of paragraph 6 excepting the income of certain roads prior to September 1, 1920, are hardly compatible with this claim by the carrier.

[5] Paragraph 4, § 15a, directs that in determining values of railway property for purposes of recapture the Commission "shall give due consideration to all the elements of value recognized by the law of the land for rate-making purposes, and shall give to the property investment account of the carriers only that consideration which, under such law, it is entitled to in establishing values for rate-making purposes." This is an express command; and the carrier has clear right to demand compliance therewith. *United States ex rel. Kansas City Southern R. Co. v. Interstate Commerce Commission*, 252 U. S. 178, 64 L. ed. 517, P.U.R.1920D, 396, 40 Sup. Ct. Rep. 187.

"The elements of value recognized by the law of the land for rate-making purposes" have been pointed out many times by this Court. *Smyth v. Ames*, 169 U. S. 466, 42 L. ed. 819, 18 Sup. Ct. Rep. 418; *Willcox v. Consolidated Gas Co.* 212 U. S. 19, 53 L. ed. 382, 29 Sup. Ct. Rep. 192, 48 L.R.A.(N.S.) 1134, 15 Ann. Cas. 1034; *Minnesota Rate Cases*, 230 U. S. 352, 57 L. ed. 1511, 33 Sup. Ct. Rep. 729, 48 L.R.A.(N.S.) 1151, Ann. Cas. 1916A, 18; *Southwestern Bell Teleph. Co. v. Public Service Commission*, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923C, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807; *Bluefield Water Works & Improv. Co. v. Public Service Com.* P.U.R.1929C.

mission, 262 U. S. 679, 67 L. ed. 1176, P.U.R.1923D, 11, 43 Sup. Ct. Rep. 675; *McCardle v. Indianapolis Water Co.* 272 U. S. 400, 71 L. ed. 154, P.U.R.1927A, 15, 47 Sup. Ct. Rep. 144. Among them is the present cost of construction or reproduction.

Thirty years ago, *Smyth v. Ames*, *supra*, announced (pp. 546, 547):

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

In *Southwestern Bell Teleph. Co. v. Public Service Commission*, *supra*, at p. 199 of P.U.R.1923C, we said: "It is impossible to ascertain what will amount to a fair return upon properties devoted to public service without giving consideration to the cost of labor, supplies, etc., at the time the investigation is made. An honest and intelligent forecast of probable future values made upon a view of all the relevant circumstances, is essential. If the highly important element of present costs is wholly disregarded such a forecast becomes impossible. Estimates for tomorrow cannot ignore prices of today."

The doctrine above stated has been consistently adhered to by this Court.

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The report of the Commission is long and argumentative. Much of it is devoted to general observations relative to the method and purpose of making valuations; many objections are urged to doctrine approved by us; and the superiority of another view is stoutly asserted. It carefully refrains from stating that any consideration whatever was given to present or reproduction costs in estimating the value of the carrier's property. Four dissenting Commissioners declare that reproduction costs were not considered; and the report itself confirms their view. Two of the majority avow a like understanding of the course pursued.

The following from the dissenting opinion of Commissioner Hall, concurred in by three others, accurately describes the action of the Commission:

"In order to determine the value of the O'Fallon property devoted to carrier service during the recapture periods, ten months in the year 1920 and the years 1921, 1922, and 1923, we start with a valuation or inventory date of June 30, 1919. The units in existence on that date are known. Original cost of the entire property can not be ascertained. As to the man-made units we estimate the cost of reproducing them in their condition on that date and in so doing apply to the units installed prior to June 30, 1914, the unit prices of 1914, representing a fairly consistent price level for the preceding five or ten years. To like units, installed after June 30, 1914, and prior to June 30, 1919, we apply the same prices, but add a sum representing price increases on those units during that period. For the third period, from June 30, 1919, down to each recapture date, we abandon estimate and turn to recorded net cost of additions less retirements. On this composite, made up of estimated value for two periods and ascertained net cost for the third period, the majority base a conclusion as to value at recapture date of the man-made items. Land goes in at its current value as measured by that of neighboring lands.

"Without summarizing the other processes, all clearly stated in the majority report, it will be observed that the rate-making value arrived at for the successive recapture periods, as for example the year 1923, rests upon 1923 market value of lands; P.U.R.1929C.

costs of other property installed since June 30, 1919; unit prices of 1914, enhanced by allowance for increased cost of units installed during June 30, 1914-1919; and, for the units installed prior to June 30, 1914, constituting by far the major part of the property, unit prices of 1914 without any enhancement whatever. As to this major part of the carrier's property devoted to carrier purposes in 1923 no consideration is given to costs and prices then obtaining or to increase therein since 1914." (124 Inters. Com. Rep. at p. 60).

[6] In the exercise of its proper function this Court has declared the law of the land concerning valuations for rate-making purposes. The Commission disregarded the approved rule and has thereby failed to discharge the definite duty imposed by Congress. Unfortunately, proper heed was denied the timely admonition of the minority—"The function of this Commission is not to act as an arbiter in economics, but as an agency of Congress, to apply the law of the land to facts developed of record in matters committed by Congress to our jurisdiction." (124 Inters. Com. Rep. at p. 59.)

The question on which the Commission divided is this: When seeking to ascertain the value of railroad property for recapture purposes, must it give consideration to current, or reproduction, costs? The weight to be accorded thereto is not the matter before us. No doubt there are some, perhaps many, railroads the ultimate value of which should be placed far below the sum necessary for reproduction. But Congress has directed that values shall be fixed upon a consideration of present costs along with all other pertinent facts; and this mandate must be obeyed.

[7] It was deemed unnecessary by the Court below to determine whether the Commission obeyed the statutory mandate touching valuations since the order permitted the O'Fallon to retain an income great enough to negative any suggestion of actual confiscation. With this we cannot agree. Whether the Commission acted as directed by Congress was the fundamental question presented. If it did not, the action taken, being beyond the authority granted, was invalid. The only power to make any recapture order arose from the statute.

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The judgment of the court below must be reversed. A decree will be entered here annulling the challenged order.

Reversed.

Mr. Justice Butler took no part in the consideration or determination of this cause.

Mr. Justice Stone dissenting: I agree with what Mr. Justice Brandeis has said and add a word only by way of emphasis of those aspects of the case which appear to me sufficient, apart from all other considerations, to sustain the finding of the Commission.

The report of the Interstate Commerce Commission is rejected and its order set aside on the sole ground that in a recapture proceeding under § 15 (a) of the Interstate Commerce Act, it has failed to consider present reproduction cost or value of appellant's property and so to "give due consideration to all the elements of value recognized by the law of the land for rate-making purposes." No constitutional question is involved.

The Commission was called upon to value a railroad, with less than 9 miles of main line track, which had been constructed prior to 1900. Much of its equipment was purchased before 1908, a considerable part being second-hand. Its traffic was very largely dependent on the output of a single coal mine which it served.

In performing its task the Commission had before it the cost of reproduction new of appellant's structural property, estimated on the basis of 1914 unit prices, "with the knowledge that the costs of reproduction so arrived at were not greatly different from the original costs." It had evidence of the actual cost of later additions and replacements, of the physical condition of the railroad and equipment, of the character, volume and sources of its traffic, of its working capital and revenues and expenses. It possessed, through its valuation department, special knowledge of the property of this carrier. Through its own experience it had the benefit of an expert knowledge of all the factors affecting value of railway property growing out of changes in methods of transportation, of improvement in transportation appliances and the consequent obsolescence of exist-

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ing equipment, of improvement in methods of railroad construction and consequent reductions in cost. Although it had estimates of present construction costs in the form of index figures based on the comparative general price levels of labor and materials for 1914 and each of the recapture years, which it considered and discussed in its report, there was no evidence before it of the actual present cost of construction of this or any other railroad or any affirmative showing that, if appellant's road was to be built and equipped anew, competent railroad engineers would deem the present structure and equipment suitable for or adaptable to the economical and efficient management contemplated by the statute.

The Commission, with all these data before it, stated that "it considered and weighed carefully, in the light of its own knowledge, each fact, circumstance and condition called to its attention on behalf of the carrier." "From this accumulation of information," it added, "we have formed our judgment as to the fair basic single sum values, not by the use of any formula, but after consideration of all relevant facts." That the Commission gave consideration to present reproduction costs appears not only from its own statement, but from the fact that it gave full effect to increased current market values in determining the value of land and to additions and betterments since June 30, 1914, taken at their cost less depreciation. In the light of those considerations which affect the present value of appellant's structural property which Mr. Justice Brandeis has mentioned, I cannot say that the Commission did not have before it the requisite data for forming a trustworthy judgment of the value of appellant's road or that it failed to give to proof of reproduction cost all the weight to which it was entitled on its merits. Had the Commission not turned aside to point out in its report the economic fallacies of the use of reproduction cost as a standard of value for rate making purposes, which it nevertheless considered and to some extent applied, I suppose it would not have occurred to anyone to question the validity of its order.

I cannot avoid the conclusion that in substance the objection, now upheld, to the order of the Commission is not that P.U.R.1929C.

it failed to consider or give appropriate weight to evidence of present reproduction cost of appellant's road, but that it attached less weight to present construction costs than to other factors before it affecting adversely the present value of the structural property. That this was the real nature of the objection voiced by the dissenting Commissioners seems to me apparent from their opinion. They seem to assume that as a result of *Southwestern Bell Teleph. Co. v. Public Service Commission*, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923C, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807, and other cases in this Court, the Commission as a matter of law may never, under any circumstances, find that the value of the structural part of a railroad does not exceed its fair value of an earlier date, if the Commission has before it evidence of later increased construction costs. They say "under the law of the land," in valuing a railroad under § 15a "we must accord weight in the legal sense to the greatly enhanced cost of material, labor, and supplies" during the recapture periods. Weight in the legal sense is evidently taken to be not that accorded by an informed judgment but imposed by some positive rule of law.

Without discussion of the evidence and other data which received the consideration of the Commission, the opinion of this Court seems to proceed on the broad assumption that the evidence relied on, mere synthetic estimates of costs of reproduction, must so certainly and necessarily outweigh all other considerations affecting values as to require the order of the Commission to be set aside. In effect the Commission is required to give to such index figures an evidential value to which it points out they are not entitled when applied to railroad properties in general or to this one in particular, and this, so far as appears, without investigation of the soundness of the reasons of the Commission for rejecting them. This Court has said that present reproduction costs must be considered in ascertaining value for rate-making purposes. But it has not said that such evidence, when fairly considered, may not be outweighed by other considerations affecting value, or that any evidence of present reproduction costs, when compared with all the other factors affecting value, must be given a weight to P.U.R.1929C.

which it is not entitled in the judgment of the tribunal "informed by experience" and "appointed by law" to deal with the very problem now presented. *Illinois Central R. Co. v. Interstate Commerce Commission*, 206 U. S. 441, 454, 51 L. ed. 1128, 27 Sup. Ct. Rep. 700. But if "weight in the legal sense" must be given to evidence of present construction costs, by the judgment now given we do not lay down any legal rule which will inform the Commission how much weight, short of its full effect, to the exclusion of all other considerations, is to be given to the evidence of synthetic costs of construction in valuing a railroad property. If full effect were to be given to it in all cases then, as the Commission points out in its report, the railroads of the country having in 1919 a reproduction cost or value of nineteen billion dollars would now have a value of forty billion dollars and we would arrive at the economic paradox that the present value of the railroads is far in excess of any amount on which they could earn a return. If less than full effect may be given, it is difficult for me to see how, without departure from established principles, the Commission could be asked to do more than it has already done—to weigh the evidence guided by all the proper considerations—or how, if there is evidence upon which its findings may rest, we can substitute our judgment for that of the Commission. Such, I believe, is the "due consideration" which the statute requires of "all the elements of value recognized by the law of the land for rate-making purposes."

As I cannot say *a priori* that increased construction costs may not be more than offset by other elements affecting adversely the present value of appellant's property, and as there was evidence before the Commission to support its findings, I can only conclude that the judgment below should be affirmed. In any case, in view of the statement of the Commission that it considered all the elements of value brought to its attention by the carrier, I should not have supposed that we could rightly set aside the present order without some consideration of the probative value of the evidence of present reproduction costs which the Commission discussed at length in its report.

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Mr. Justice Holmes and Mr. Justice Brandeis concur in this opinion.

Mr. Justice Brandeis, dissenting:

The main question for consideration is that of statutory construction. By Transportation Act, 1920, February 28, 1920, Chap. 91, § 15a, 41 Stat. 456, 488, Congress delegated to the Interstate Commerce Commission the duty to establish and maintain rates which will yield "a fair return upon the aggregate value of the railway property" of the United States. By paragraph 4 thereof, it directs that in ascertaining value the Commission shall "give due consideration to all the elements of value recognized by the law of the land for rate-making purposes;" and shall "give to the property investment account . . . only that consideration which, under such law, it is entitled to in establishing values for rate-making purposes." The report of the Commission, which accompanies the order challenged, declares: "In the methods of valuation which we have followed in this proceeding we have endeavored to give heed to this direction [that contained in paragraph 4] . . ." Excess Income of St. Louis & O'Fallon R. Co. 124 Inters. Com. Rep. 3, 19.

Speaking for the dissenting members, Mr. Commissioner Hall said: "If the law needs change, let those who made it change it. Our duty is to apply the law as it stands." (pp. 63, 64.) And Mr. Commissioner Aitchison added: "If we anticipate grave results will follow, our responsibility will be fully met if we suggest to the Congress, under our statutory powers to recommend new legislation to that body, the enactment of a rule for rate making under the commerce clause which will have no such unfavorable effects." (p. 64.)

Section 15a makes no specific reference either to the original cost of the property, or to prudent investment, or to current reproduction cost, or to the then existing price level. Section 19 (a) the (valuation provisions of the Act of 1913), to which § 15a refers, directs the Commission to report, among other things, "in detail as to each piece of property, . . . the original cost to date, the cost of reproduction new, the cost of P.U.R.1929C.

reproduction less depreciation;" and also "other values, and elements of value." After the enactment of § 15a and before entry of the order challenged, it was held in *Southwestern Bell Teleph. Co. v. Public Service Commission*, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923C, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807, a case arising under a state law, that the rate base on which a public utility is constitutionally entitled to earn a fair return is the then actual value of the property used and useful in the business, not the original cost or the amount prudently invested in the enterprise. The Government concedes that current reproduction cost is admissible as evidence to show present value under § 15a. The carrier concedes now that neither Congress, nor the common law, made current reproduction cost the measure of value. The question on which the Commission divided is this: Did Congress require the Commission when acting under § 15a to give, in all cases and in respect to all property, some, if not controlling, effect to evidence establishing the estimated current cost of reproduction? Or did Congress intend to leave to the Commission the authority to determine, as in passing upon other controverted issues of fact, what weight, if any, it should give to that evidence?

The O'Fallon contends, among other things, that the order is confiscatory. The claim is that the order left to the company a return of only 4.35 per cent upon the value ascertained in accordance with the rule declared in the *Southwestern Bell* case and *McCardle v. Indianapolis Water Co.* 272 U. S. 400, 71 L. ed. 154, P.U.R.1927A, 15, 47 Sup. Ct. Rep. 144. If this were true, it would be immaterial whether Congress purported to authorize the course pursued by the Commission. But the fact is that, in each of the recapture periods, the earnings were so large as to leave, after making the required payments to the Commission, about 8 per cent on what the carrier alleged was the fair value of the property. The O'Fallon argues that, since the statute and the order required it to hold as a reserve one-half of the excess over 6 per cent, it is deprived of that property. This is not true. The requirement that one-half of the earnings in excess of 6 per cent shall be retained by the carrier until the reserve equals 5 per cent of the value of the

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railroad does not deprive the carrier of any property, it merely regulates the use thereof. Compare *Kansas City Southern R. Co. v. United States*, 231 U. S. 423, 453, 58 L. ed. 296, 34 Sup. Ct. Rep. 125. The provision is one designated to secure financial stability; and is similar to those prescribing sinking funds, depreciation, and other appropriate accounts.¹ Congress may regulate the use of railroad property so as to insure financial as well as physical stability. Both are essential to the safety and the service of the public. In *Dayton-Goose Creek R. Co. v. United States*, 263 U. S. 456, 486, 68 L. ed. 388, 44 Sup. Ct. Rep. 169, 33 A.L.R. 472, where the facts were in this respect identical with those in the case at bar, the constitutional validity of the order was sustained. If the failure to give to the evidence of current reproduction costs the effect claimed for it by the O'Fallon was error, it is not because the carrier's constitutional rights have been invaded, but because the Commission failed to observe a rule prescribed by Congress for determining the amounts to be recaptured and reserved.

The claim of the O'Fallon is in substance that, since construction costs were higher during the recapture periods than in 1914, the order should be set aside, because the Commission failed to find that the existing structural property and equipment which had been acquired before June 30, 1914, was worth more than it had been then.² The Commission undertook, as will be shown, to find present actual value and, in so doing, both to follow the direction of Congress and to apply the rule declared in the *Southwestern Bell* case, *supra*. It is true that

¹ See Report of Senate Committee reporting S. 3288, Report No. 307, p. 19, 66th Congress, 1st Session: "The company's reserve fund may be drawn upon by the carrier whenever its annual railway operating income falls below 6 per cent of the value of the property. The reserve fund is, of course, the absolute property of the carrier; and the purpose in requiring it to be established and maintained is to give stability to the credit of the carrier and enable it to render more efficiently the public service in which it is engaged."

² The complaint concerns all the structural property and equipment acquired before June 30, 1919. But, as nearly all of this had been installed before July 1, 1914, the discussion is limited to the property acquired before June 30, 1914—the valuation being made on the basis of construction costs as of that date.

this Court there declared that current reconstruction cost is an element of actual value; and that Congress directed the Commission "to give due consideration to all the elements of value recognized by the law of the land for rate-making purposes." But, while the act required the Commission to consider all such evidence, neither Congress nor this Court required it to give to evidence of reconstruction cost a mechanical effect or artificial weight. They left untrammelled its duty to give to all relevant evidence such probative force as, in its judgment, the evidence inherently possesses. The Commission concluded that in respect to the evidence of reproduction costs the differences between the Southwestern Bell case, *supra*, and that at bar were such as to lead to different results in the two cases. It did so mainly because "in the administration of the valuation and recapture provisions," ascertainment of value "is affected by a vast variety of considerations that either do not enter into, or are less easily perceived in, problems incident to the regulation of local public utilities." (p. 27 of 124 Inters. Com. Rep.) In my opinion the conclusions of the Commission are well founded. To make clear the reasons, requires consideration of the function of the Commission in applying § 15a and of the problems with which it is confronted.

First. The Commission is a fact-finding body. The question whether it must give to confessedly relevant facts evidential effect is solely one of adjective law. Statutes have sometimes limited the weight or effect of evidence. They have often created rebuttable presumptions and have shifted the burden of proof. But no instance has been found where under our law a fact-finding body has been required to give to evidence an effect which it does not inherently possess. Proof implies persuasion. To compel the human mind to infer in any respect that which observation and logic tells us is not true interferes with the process of reasoning of the fact-finding body. It would be a departure from the unbroken practice to require an artificial legal conviction where no real conviction exists.*

An arbitrary disregard by the Commission of the probative

* Compare Best on Evidence (seventh English edition) §§ 69, 70; *Manley v. Georgia*, 278 U. S. —, 73 L. ed. —, 49 Sup. Ct. Rep. 215. P.U.R.1929C.

effect of evidence would, of course, be ground for setting aside an order, as this would be an abuse of discretion. Orders have been set aside because entered without evidence;⁴ or because matters of fact had been considered which were not in the record;⁵ or because the Commission excluded from consideration facts and circumstances which ought to have been considered;⁶ or because it took into consideration facts which could not legally influence its judgment.⁷ But no case has been found in which this Court has set aside an order on the ground that the Commission failed to give effect to evidence which seemed to the Court to be of probative force, or on the ground that the Commission had drawn from the evidence an inference or conclusion deemed by the Court to be erroneous.⁸ On the contrary,

⁴ See *Interstate Commerce Commission v. Union P. R. Co.* 222 U. S. 541, 547, 56 L. ed. 308, 32 Sup. Ct. Rep. 108; *Interstate Commerce Commission v. Louisville & N. R. Co.* 227 U. S. 88, 92, 57 L. ed. 431, 33 Sup. Ct. Rep. 185; *Florida East Coast R. Co. v. United States*, 234 U. S. 167, 58 L. ed. 1267, 34 Sup. Ct. Rep. 867; *New England Divisions Case*, 261 U. S. 184, 203, 67 L. ed. 605, 43 Sup. Ct. Rep. 270.

⁵ See *Interstate Commerce Commission v. Louisville & N. R. Co.* *supra*, at p. 93 of 227 U. S.; *Chicago Junction Case*, 264 U. S. 258, 263, 68 L. ed. 667, 44 Sup. Ct. Rep. 317.

⁶ See *Texas & P. R. v. Interstate Commerce Commission*, 162 U. S. 197, 40 L. ed. 940, 16 Sup. Ct. Rep. 666; *Interstate Commerce Commission v. Alabama Midland R. Co.* 168 U. S. 144, 42 L. ed. 414, 18 Sup. Ct. Rep. 45; *Interstate Commerce Commission v. Northern P. R. Co.* 216 U. S. 538, 54 L. ed. 608, 30 Sup. Ct. Rep. 417.

⁷ See *Florida East Coast R. Co. v. United States*, *supra*, at p. 187 of 234 U. S.; *Central R. Co. v. United States*, 257 U. S. 247, 66 L. ed. 217, 42 Sup. Ct. Rep. 80.

⁸ Alleged errors of the Interstate Commerce Commission in weighing evidence or drawing inferences therefrom have been urged as grounds for reversal in many cases. This Court has consistently held that the Commission's decisions as to such matters are not the proper subject for judicial review. See e. g., *Cincinnati, H. & D. R. Co. v. Interstate Commerce Commission*, 206 U. S. 142, 154, 51 L. ed. 995, 27 Sup. Ct. Rep. 648; *Illinois Central R. Co. v. Interstate Commerce Commission*, 206 U. S. 441, 51 L. ed. 1128, 27 Sup. Ct. Rep. 700; *Interstate Commerce Commission v. Illinois Central R. Co.* 215 U. S. 452, 470, 54 L. ed. 280, 30 Sup. Ct. Rep. 155; *Los Angeles Switching Case*, 234 U. S. 294, 58 L. ed. 1319, 34 Sup. Ct. Rep. 814; *United States v. New River Co.* 265 U. S. 533, 68 L. ed. 1165, 44 Sup. Ct. Rep. 610; *Western Chemical Co. v. United States*, 271 U. S. 268, 70 L. ed. 941, 46 Sup. Ct. Rep. 500; *Virginian R. Co. v. United States*, 272 U. S. 658, 71 L. ed. 463, 47 Sup. Ct. Rep. 222; *Chicago, R. I. & P. R. v. United States*, 274 U. S. 29, 71 L. ed. 911, 47 Sup. Ct. Rep. 486; P.U.R.1929C.

findings of the Commission involving the appreciation or effect of evidence have been treated with the deference due to those of a tribunal "informed by experience" and "appointed by law" to deal with an intricate subject. *Illinois Central R. Co. v. Interstate Commerce Commission*, 206 U. S. 441, 454, 51 L. ed. 1128, 27 Sup. Ct. Rep. 700. Unless, therefore, Congress required the Commission, not only to consider evidence of reconstruction cost in ascertaining values for rate-making purposes under § 15a, but also to give, in all cases and in respect to all property, some weight to evidence of enhanced reconstruction cost, even if that evidence was not inherently persuasive, the Commission was clearly authorized to determine for itself to what extent if any, weight should be given to the evidence; and its findings should not be disturbed by the Court, unless it appears that there was an abuse of discretion.

Second. While current reproduction cost may be said to be an element in the present value of property, in the sense that it is "evidence properly to be considered in the ascertainment of value." *Standard Oil Co. v. Southern Pacific Co.* 268 U. S. 146, 156, 69 L. ed. 890, 45 Sup. Ct. Rep. 465, it is clear that current cost of reproduction higher than the original cost does not necessarily tend to prove a present higher value. Often the fact of higher reconstruction cost is without any influence on present values. It is common knowledge that the current market value of many office buildings and residences constructed prior to the World War have failed to reflect the greatly in-

Assigned Car Cases, 274 U. S. 564, 71 L. ed. 1204, 47 Sup. Ct. Rep. 727. The following excerpts from recent opinions succinctly express the Court's position in the matter:—"The courts will not review determinations of the Commission made within the scope of its powers or substitute their judgment for its findings and conclusions." *United States v. New River Co. supra*, at p. 542 of 265 U. S. "To consider the weight of the evidence is beyond our province." *Western Chemical Co. v. United States, supra*, at p. 271 of 271 U. S. "This Court has no concern with the correctness of the Commission's reasoning, with the soundness of its conclusions, or with the alleged inconsistency with findings made in other proceedings before it." *Virginian R. Co. v. United States, supra*, at pp. 665, 666 of 272 U. S. "But if the determination of the Commission finds substantial support in the evidence, the courts will not weigh the evidence nor consider the wisdom of the Commission's action." *Chicago, R. I. & P. R. Co. v. United States, supra*, at pp. 33, 34, of 274 U. S. P.U.R.1929C.

creased building costs of recent years, although the need of new buildings of like character was being demonstrated by the large volume of construction at the higher price level. Many railroads built before the World War, have never been worth as much as their original cost, because high construction cost combined with adverse operating conditions and limited traffic have at all times prevented their earning, despite reasonable rates, a fair return on the original cost. The Puget Sound extension of the Chicago, Milwaukee & St. Paul is a notable example.⁹ Many branches, and indeed whole lines of railroad, have been scrapped since 1920. Abandonment of 2,439 miles of railroad was authorized under paragraph 18 of § 1 of the Interstate Commerce Act between 1920 and 1925; and in the three following years 2,010 miles more.¹⁰ These properties had, in the main, become valueless for transportation, either because traffic

⁹ The Puget Sound Extension of the Chicago, Milwaukee & St. Paul Railway was completed in 1909 at a cost of about \$257,000,000. It earned, during fifteen years, little more than operating expenses. As late as 1925, its net operating income was "only about one-half of 1 per cent on this investment." Investigation of Chicago, M. & St. P. R. Co. 131 Inters. Com. Rep. 615, 617, 619, 621. The upset cash price fixed by the court in the foreclosure proceeding was \$42,500,000. Guaranty Trust Co. v. Chicago, M. & St. P. R. Co. 15 F. (2d) 434, 443.

Another striking example of the discrepancy often existing between market price or actual value and reproduction cost is to be found in the case of the Detroit, Toledo & Ironton Railroad, which Mr. Ford purchased in 1920 for \$6,800,000. It was said to have a physical value of between \$16,000,000 and \$20,000,000. Railway Age, Vol. 69.1, p. 132.

In an order granting, on March 8, 1929, the application of the Nashville, Chattanooga & St. Louis Railway to abandon its Middle Tennessee & Alabama branch, which had been in operation more than thirty years, the Interstate Commerce Commission said: "The applicant contends that the project was poorly conceived and doomed to failure from the outset." 150 Inters. Com. Rep. 539, 540.

"But cost of reproduction obviously does not measure value in the sense of what a purchaser would pay for a property. Let the owners of the old Wabash Pittsburgh Terminal put their road upon the market to prove the Reports of the Interstate Commerce Commission, 1921, p. 19; 1922, p. 219; 1923, p. 237; 1924, p. 253; 1925, p. 263; 1926, p. 286; 1927, p. 294; 1928, p. 298.

¹⁰ Motor Bus and Motor Truck Operation, 140 Inters. Com. Rep. 685, 727. See Annual Reports of the Commission, 1921, p. 19; 1922, p. 219; 1923, p. 237; 1924, p. 253; 1925, p. 263; 1926, p. 286; 1927, p. 294; 1928, p. 298.

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ceased to be available or because competitive means of transportation precluded the establishment of remunerative rail rates.¹¹ Obviously, no one would contend that their actual value just before abandonment was what it originally cost to construct them or what it would then have cost to reconstruct them.

Third. The terms of § 15a and its legislative history preclude the assumption that Congress intended by paragraph 4 to deny to the Commission in respect to evidence of reconstruction cost the discretion commonly exercised in determining what weight, if any, shall be given to an evidential fact. In 1920, no fact was more prominent in the mind of the public and of Congress than that the cost of living was far greater than that prevailing when the existing railroads were built.¹² But, neither in Transportation Act, 1920, nor in any Committee report, is there even a suggestion that the Commission would be required to give to that fact any effect in ascertaining values for rate-making purposes under § 15a. If it had been the intention of Congress to compel the Commission to increase values for rate-making purposes because the price level had risen, it would naturally have incorporated such a direction in the paragraph. On the other hand, the Committee reports and the debates show that the opinion was quite commonly held that the actual values were less than the property investment account

¹¹ Motor competition has to some extent been a factor in such abandonments. For instances arising since October 31, 1927, see *Abandonment by Potato Creek R. Co.* 131 Inters. Com. Rep. 481, 482; *Pennsylvania R. Co.* 131 Inters. Com. Rep. 547, 548; *Grand Rapids & I. R. Co.* 138 Inters. Com. Rep. 345; *Spokane, Coeur d'Alene & Palouse R. Co.* 138 Inters. Com. Rep. 722, 723; *Illinois Traction, Inc.* 145 Inters. Com. Rep. 20; *Western Maryland R. Co.* 145 Inters. Com. Rep. 232; *Southern R. Co.* 145 Inters. Com. Rep. 355; *St. Louis-San Francisco R. Co.* 145 Inters. Com. Rep. 379, 383; *Pere Marquette R. Co.* 145 Inters. Com. Rep. 560, 561; *Chicago, R. I. & P. R. Co.* 145 Inters. Com. Rep. 698, 699; *Southern Pacific Co.* 145 Inters. Com. Rep. 705, 707. Compare *Hill City R. Co.* 150 Inters. Com. Rep. 159.

¹² Senator Cummins stated that the cost of living was then from 80 to 100 per cent above pre-war prices. 59 Cong. Rec., Part I, p. 129. See also, Senate Committee Hearings, Vol. 148, Part II, p. 277; House Committee Hearings, Vol. 232, Part I, pp. 376-377.
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appearing on the books of the carriers;¹³ and the proposal made by the railroads that the investment account be accepted as the measure of value was resisted as being excessive.¹⁴ The property investment account in 1920 was about 19 billions of dollars.¹⁵ The then reproduction cost of the railroads, applying index figures to estimated actual cost, was over 40 billions.¹⁶ It is inconceivable that Congress, after rejecting property investment account as excessive, intended by § 15a to make mandatory on the Commission the consideration of elements which would give a valuation double that which had been re-

¹³ Senator Cummins said "I think there are a great many instances in which the investment accounts are larger than any possible value that could be attributed to the property." 59 Cong. Rec., Part I, p. 126. "My own judgment is, however, that the value of the properties is less than the aggregate investment accounts . . ." pp. 135-136. For other expressions of opinion to the same effect see pp. 224, 228, 905. Senator Cummins stated that the aggregate of the investment accounts was about \$19,000,000,000. (p. 127.) See also p. 130. Compare Mr. Esch, 50 CONGRESSIONAL RECORD, Part 4, p. 3269.

¹⁴ The Commission says (124 Inters. Com. Rep. 39): "In this connection it is significant that when the legislation of 1920, of which § 15a is a part, was under congressional consideration there was offered in behalf of the carriers a proposed bill in which their recorded investment in road and equipment was made the sole element in the determination of the rate base. It is also worthy of note that when the legislation of 1920 was under such consideration a representative of this Commission on September 26, 1919, in response to a question, publicly informed the congressional committee that he knew of no warrant for an assumption 'that the Commission will base the value of the property wholly or in part on present prices.'"

The investment in road and equipment as stated on the books of the Kansas City, Mexico & Orient Railroad Company (of Kansas) as of June 30, 1919, was \$22,190,935. The final valuation by the Commission as of that date was \$6,453,528. After that date \$1,064,782 was expended for additions and betterments, making a total value of \$7,518,310. The Kansas City, Mexico & Orient of Texas (with expenditures for additions) was valued at \$6,854,522. Kansas City, Mexico & Orient R. Co. 135 Inters. Com. Rep. 217; Kansas City, Mexico & Orient Reorganization, 145 Inters. Com. Rep. 339, 344. These properties, with an aggregate book value of \$29,045,457 were valued by the Commission at \$14,372,832 and, with 320 miles of road in Mexico added, were purchased by the Atchison, Topeka & Santa Fe Railroad for \$14,507,500. See Control of Kansas City, Mexico & Orient R. Co. 145 Inters. Com. Rep. 350.

¹⁵ See note 13.

¹⁶ Excess Income of St. Louis & O'Fallon R. Co. 124 Inters. Com. Rep. 3, 32.

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jected. The insertion in § 15a of the provision that the Commission "shall give to the property investment account of the carriers only that consideration which under the law it is entitled to in establishing values for rate-making purposes" and the rejection of other proposed measures of value show that Congress intended not to impose restrictions upon the discretion of the Commission.¹⁷

Congress did intend to provide a return on the existing railroad property which should be only slightly more than that which had been enjoyed during the six preceding years. To have required that the then price level be reflected in the values to be fixed under § 15a would have resulted in a rate-base of double the property investment account of the carriers. For the cost of living was then about double pre-war prices. The prescribed fair return applied to such a rate base would have produced more than double the average net earnings from operation of the several properties during the three years preceding Federal control; more than double the amount which the carriers agreed to accept under the Federal Control Act, March 21, 1918, chap. 25, § 1, 40 Stat. 451, as fair compensation for the use of their property; more than double the guarantee provided by Transportation Act, 1920, § 209, for the six months' period after the surrender of control. The sum which the railroads had thus earned net in those six years equalled 5.2 per cent on the property investment account, as carried on their books.

In making provisions for a fair return, the main purpose was not to increase the earnings of capital already invested in railroads, but to attract the new capital needed for improvement or extension of facilities.¹⁸ This was to be accomplished by

¹⁷ Contemporary opinion of the railroads to this effect was expressed in their behalf in the hearings held before the Interstate Commerce Commission on March 22-24, 1920 (Hearings, In re: § 422 of the Transportation Act, Ex parte 71, p. 134).

¹⁸ "The writer of this report is firmly convinced that when the government assumed the operation of the railways they were, taken as a whole, earning all that they should be permitted to earn; but, in the inevitable distribution of these earnings among the various railway companies, the railways which carried 30 per cent of the traffic were earning so little that they could not, by any economy or good management, sustain themselves." P.U.R.1929C.

raising the rate of return from 5.2 per cent to 5.5 per cent (Senate Reports, Vol. 1, No. 304, 66th Cong., 1st Sess.):

"The basis adopted by the Committee is $\frac{1}{10}$ of 1 per cent higher than the basis of the test period [the three years preceding June 30, 1917]; and assuming, though not conceding, that the value of the property is equal to the property investment accounts, it will yield for all the railways a net operating income of \$54,000,000 in excess of the income of the test period. There were two considerations which led the majority of the committee to believe that this increase is not only warranted but necessary:

"First. The railways are being returned to their owners when everything is unsettled and abnormal; when there is suspicion and distrust everywhere. Just what rate of return will enable the carriers to finance themselves under such conditions can not, with certainty be determined. It was felt, therefore, that some increase over the pre-war period was justifiable.

"Second. As compared with all kinds of commodities, money is much less valuable than it was a few years ago, and it would seem to be only fair that the returns from railway investments should be reasonably advanced."

The means by which the bill was to accomplish the desired end are thus stated in the report:

"First: By prescribing a basis of return upon the value of the railway property, to give such assurance to investors as will incline them to look with favor upon railway securities; that is to say, by making a moderate return reasonably certain to establish credit for the carriers.

"Second: In making the return fairly certain to secure for the public a lower capital charge than would otherwise be necessary.

"Third. In requiring some carriers, which, under any given body of rates, will earn more than a fair return, to pay the excess to the Government and in so using this excess the transportation facilities or credit can be furnished to the weaker

Senate Reports, No. 304, Vol. 1, 66th Cong., 1st Sess. A rate base which reflected the then increase in price levels over 1914 would have yielded about \$700,000,000 more than the income of the test period.

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carriers, and thus help to maintain the general system of transportation."

Either increase in the rate of return or increase of the base on which that return is measured would have served to adjust compensation to higher price levels. The adoption by Congress of the increase in the return, as the means of compensating for the decreased purchasing power of the dollar, precludes the assumption that it intended that the valuation should reflect that lessened purchasing power. By explicitly choosing the former Congress implicitly rejected the latter.¹⁹ For to have allowed an increase in both would have gone beyond adjusting earnings to increased costs and have made this increase a mere pretext for allowing unwarranted profits to the railroads. The proceedings which led to the passage of the act make it clear that Congress intended no such result.

Fourth. The declared purpose of Congress in enacting § 15a was the maintenance of an adequate national system of railway transportation, capable of providing the best possible service to the public at the lowest cost consistent with full justice to the private owners. Following the course consistently pursued by this Court in applying other provisions of the Interstate Commerce Act, *Texas & P. R. Co. v. Interstate Commerce Commission*, 162 U. S. 197, 211, 219, 40 L. ed. 940, 16 Sup. Ct. Rep. 666; *New England Divisions Case*, 261 U. S. 184, 189-190, 67 L. ed. 605, 43 Sup. Ct. Rep. 270; *Dayton-Goose Creek R. Co. v. United States*, 263 U. S. 456, 478, 68 L. ed. 388, 44 Sup. Ct. Rep. 169, 33 A.L.R. 472, the Commission construed § 15a in the light of the declared purpose of Congress and of the economic factors involved. From its wide knowledge of actual condition and its practical experience in

¹⁹ Senator Kellogg, in the debate on the bill, justified the 5½ per cent return by the same argument as used by the committee in reporting the bill: "Again it must be remembered that 5½ per cent today is not equal to 5½ per cent five years ago. The great inflation of currency and the general rise in all commodities have made a dollar very much less in purchasing power." (59 Cong. Rec., Part 1, p. 224). The same recognition of increased costs had been given as a justification for the liberal return authorized by the Federal Control Act, 1916 and 1917, two of the three years taken as a basis for measuring the return, were the most prosperous in the history of the railroads. (See 56 Cong. Rec., Part II, p. 2021.) P.U.R.1929C.

rate making, it concluded that to give effect to enhanced reproduction costs would defeat that purpose. (p. 27.)

It knew that the value for rate-making purposes could not be more than that sum on which a fair return could be earned by legal rates; and that the earnings were limited both by the commercial prohibition of rates higher than the traffic would bear and the legal prohibition of rates higher than are just and reasonable. It knew that a rate base fluctuating with changes in the level of general prices would imperil industry and commerce. It knew that the adoption of a fluctuating rate base would not, as is claimed, do justice to those pre-war investors in railroad securities who were suffering from the lessened value of the dollar, since the great majority of the railroad securities are represented by long term bonds or the guaranteed stocks of leased lines which bear a fixed return; and that only the stockholders could gain through the greater earnings required to satisfy the higher rate base. It recognized that an adequate national system of railways, so long as it is privately owned, cannot be provided and maintained without a continuous inflow of capital; that "obviously, also, such an inflow of capital can only be assured by treatment of capital already invested which will invite and encourage further investment." (p. 30); and that as was said in *Dayton-Goose Creek R. Co. v. United States*, *supra*, at p. 481 of 263 U. S.: "By investment in a business dedicated to the public service the owner must recognize that as compared with investment in private business, he cannot expect either high or speculative dividends but that his obligation limits him to only fair or reasonable profit."²⁰

The conviction that there would in time be a fall in the price

²⁰ Mr. Esch, in submitting the conference report to the House, said: "Investors want something definite and fixed upon which they can reckon. The provisions of § 422 give that stability, that standard which I trust, will encourage investment . . ." 59 Cong. Rec., Part 4, p. 3269. The Commission points out (p. 32): "In other words, assuming a static property [valued at \$18,000,000,000] there would have been a gain of 23.4 billions in 1920, a loss of 6.3 billions in 1921, a further loss of 6.8 billions in 1922, and a gain again of 3 billions in 1923. These huge 'profits' and 'losses' would have occurred without change in the railroad property used in the public service other than the theoretical and speculative change derived from a shifting of general price levels." P.U.R.1929C.

level was generally held. As a fluctuating rate base would thus directly imperil industry and commerce and investments made at relatively high price levels during and since the world war;²¹ would tend to increase the cost of new money required to supply adequate service to the public; and would discourage such investment, the Commission concluded that Congress could not have intended to require it to measure the value or rate base by reproduction cost, since this would produce a result contrary to its declared purpose. And as confirming its construction of § 15a the Commission showed that, with the stable rate base which it had accepted as the basis for administering the act, the aim of Congress to establish an adequate national system had been attained. It pointed out that: "During the period 1920-1926, inclusive, the investment in railroad property increased by four billions of dollars. A substantial part of this money was derived from income, but much of it was obtained by the sale of new securities. The market for railroad securities since the passage of the Transportation Act, 1920, has steadily improved and the general trend of interest rates has been downward. The credit of the railroads in general is now excellent. . . ." (p. 33 of 124 Inters. Com. Rep.)

Fifth. Other considerations confirm the construction given by the Commission to the phrase "value for rate-making purposes," as used in § 15a. In condemnation proceedings, the owner recovers what he has lost by the taking of the property, *Boston Chamber of Commerce v. Boston*, 217 U. S. 189, 195, 54 L. ed. 725, 30 Sup. Ct. Rep. 459; and such loss must be determined "not merely with reference to the uses to which it is at the time applied, but with reference to the uses to which it is plainly adapted." *Boom Co. v. Patterson*, 98 U. S. 403, 408, 25 L. ed. 206. Compare *Louisville & N. R. Co. v. Barber*

²¹ "During the seven years 1920 to 1926, inclusive, there was an approximate net investment in additions and betterments and new construction of 4 billions. These were paid for at then current prices, all above, in many cases far above, present prices. Assuming that there has since been an average decline in unit price level of 25 per cent, a valuation under the current reproduction cost doctrine would wipe out one billion of that additional investment. The effect upon any railroad entirely or largely constructed during the period 1920 to 1926 may be imagined." (p. 32.) P.U.R.1929C.

Asphalt Paving Co. 197 U. S. 430, 435, 49 L. ed. 819, 25 Sup. Ct. Rep. 466. But the actual value of a railroad—its value for rate-making purposes under § 15a—may be less than its condemnation value. As was said in *Southern R. Co. v. Kentucky*, 274 U. S. 76, 81-82, 71 L. ed. 934, 47 Sup. Ct. Rep. 542, a case involving state taxation: "The value of the physical elements of a railroad—whether that value be deemed actual cost, cost of reproduction less depreciation or some other figure—is not the sole measure of or guide to its value in operation. *Smyth v. Ames*, 169 U. S. 466, 557, 42 L. ed. 819, 18 Sup. Ct. Rep. 418. Much weight is to be given to present and prospective earning capacity at rates that are reasonable, having regard to traffic available and competitive and other conditions prevailing in the territory served."

Value has been defined as the ability to command the price.²² Railroad property is valuable as such only if, and so far as, used. If rates are too high, the traffic will not move. Hence, the value or rate base is necessarily dependent, in the first place, upon the commercial ability of the property to command the rates which will yield a return in excess of operating expenses and taxes; and such value cannot be higher than the sum on which, with the available traffic, the fair return fixed under § 15a can be earned. Persistent depression of rates or lessening in volume of traffic, from whatever cause arising, ordinarily tends to lower actual values of railroad properties. It follows, that since the Commission is required by the rule of *Smyth v. Ames*, *supra*, reaffirmed in the *Southwestern Bell* case, *supra*, to determine the rate base under § 15a by actual value as distinguished from prudent investment, it must in making the finding consider the effect upon value of both the commercial

²² The value of the plant is "a result of the rates rather than a basis for rates. . . . If rates are established upon a basis of reproduction cost, value will tend to approximate such cost, but this will be through the operation of economic law and not because a certain figure has been decreed as value." F. G. Dorety, "The Function of Reproduction Cost," 37 *Harvard Law Rev.* 173, 189. Compare *Monongahela Navigation Co. v. United States*, 143 U. S. 312, 328, 37 L. ed. 463, 13 Sup. Ct. Rep. 622; *Cleveland, C. C. & St. L. R. Co. v. Backus*, 154 U. S. 439, 445, 38 L. ed. 1041, 14 Sup. Ct. Rep. 1122; 1 Taussig, *Principles of Economics*, 115; Laughlin, *Elements of Political Economy*, pp. 75-77. P.U.R.1929C.

and the legal limitations upon rates and, among other things, the effect of competition upon the volume of traffic.

Recent experience affords striking examples of commercial limitations upon rates. In *Ex Parte 74, Increased Rates, 1920, 58 Inters. Com. Rep. 220*, the Commission sought to establish rates which would yield 6 per cent upon the aggregate values of the railroads in the several groups. The carriers claimed as the aggregate value \$20,040,572,611—that amount being carried on their books as the cost of road and equipment. The Commission fixed the value about 5 per cent lower—at \$18,900,000,000. In order to produce on that sum net earnings equal to 6 per cent, it increased freight rates, in the eastern group, 40 per cent over the then existing rates; in the southern group 25 per cent; in the western group 35 per cent; and in the mountain-Pacific group 25 per cent.²³ As a result of these increases, the average gross revenue per ton mile in 1921 was in the eastern district 96.1 per cent greater than for the fiscal year ended June 30, 1914; in the southern, 61.4; in the western, 59.3; and in the United States as a whole, 76.2. Reduced Rates, 1922, 68 *Inters. Com. Rep. 676, 702*. Passenger rates were subjected by the order in *Ex parte 74*, to a flat increase of 20 per cent and surcharges were added (p. 242).²⁴

On a large number of basic commodities, which were among the most important articles of commerce, the rates proved to be higher than the traffic would bear. Reductions became imperative. Within a year after the entry of that order, many applications for reductions were made to the Commission, not only by shippers but also by the carriers themselves. It was estimated that the reductions in freight rates made by the carriers prior to March 15, 1922, would aggregate for that year \$186,700,000; and would lower the general rate level nearly 5 per cent. On some important articles of traffic the entire increase made by *Ex parte 74, 58 Inters. Com. Rep. 220*, was

²³ Large increases had been made theretofore. A general rate increase of 5 per cent in 1914, *Five Per Cent Case, 31 Inters. Com. Rep. 351*; 32 *Inters. Com. Rep. 325*; 15 per cent in 1917, *Fifteen Per Cent Case, 45 Inters. Com. Rep. 303*; and 25 per cent in 1918, *General Order of Director General, No. 28*.

²⁴ They had been raised 40 per cent before.
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canceled.²⁵ Further reductions were then ordered by Reduced Rates, 1922, 68 Inters. Com. Rep. 676, the Commission saying (pp. 732, 733): "High rates do not necessarily mean high revenues, for, if the public cannot or will not ship in normal volume, less revenue may result than from lower rates. Shippers almost unanimously contend, and many representatives of the carriers agree, that 'freight rates are too high and must come down.' This indicates that transportation charges have mounted to a point where they are impeding the free flow of commerce and thus tending to defeat the purpose for which they were established, that of producing revenues which would enable the carriers 'to provide the people of the United States with adequate transportation.'" further reductions made in the year 1923 are said to have again lowered freight rates 5 per cent.²⁶ The effect of the several reductions made in the rates authorized by Ex parte 74, *supra*, is said to have lowered by \$800,000,000 the freight charges otherwise payable on the traffic carried during the eighteen months ending December 31, 1923.²⁷ Each year since has witnessed a further lowering in the revenue per ton mile and per passenger mile.²⁸

²⁵ See Rate Reductions, House Doc. No. 115, 67th Congress, 1st Session, e. g., p. 7: "Reductions in all rates on iron ore throughout the so-called eastern territory, including generally points east of the Mississippi and north of the Potomac and Ohio rivers, including, of course, ex-Lake ore moving from Lake Erie ports. These reductions will eliminate all increases effected under Ex parte 74, *supra*, and it is conservatively estimated the amount will reach in round figures \$5,000,000 per year." For instances of important reductions made by the carriers voluntarily, see Smelter Products from Nevada & Utah, 61 Inters. Com. Rep. 374; Grain from Illinois Points to New Orleans, 69 Inters. Com. Rep. 38; Duquesne Reduction Co. v. Pennsylvania R. Co. 96 Inters. Com. Rep. 351, 354, 355.

²⁶ Railway Age, 1924—Vol. 76.1, p. 726.

²⁷ Letter of Chairman Hall to Senator E. D. Smith, May 28, 1924, 68 Cong. Rec., Part 10, p. 10275.

	1921	1922	1923	1924	1925	1926	1927
²⁸ Revenue per ton mile (cents)	1.294	1.194	1.132	1.132	1.114	1.096	1.095
Revenue per passenger mile (cents)	3.093	3.037	3.026	2.985	2.944	2.941	2.901

Annual Report of the Interstate Commerce Commission for 1928, p. 115. It is impossible to say to what extent this persistent shrinkage has been the result of miscellaneous rate adjustments and to what extent to fluctuations in character or traffic. Statistics of Railways in the United States, I. C. C. 1927, p. X. P.U.R.1929C.

This constant lowering of the weighted average of rates since 1920 must have been due to causes other than desire on the part of the Commission. Its aim was to adjust rates so that they would yield the prescribed return. But for the period from 1920 to 1927 inclusive, there was only one year in which the railroads of the United States as a whole, despite general prosperity and greater efficiency earned on the value found in *Ex parte* 74, *supra*, brought down to date, the full average return prescribed as fair under § 15a.²⁹ The Commission repeatedly refused to permit carriers to make reductions, because the reduction would lower the revenues sought to be provided under § 15a.³⁰ On the other hand, carriers, although earning less than the fair return prescribed under § 15a, have often voluntarily reduced rates.³¹ The lowering of rates was probably

²⁹ The fair return for the first two years was fixed by Congress at 5½ per cent, and the Commission was authorized to add one-half of one per cent for improvements, betterments, and equipment. This additional allowance was granted in *Ex parte* 74, 58 Inters. Com. Rep. 220. For the rest of the period it was prescribed by the Commission at 5½ per cent. Reduced Rates, 1922, 68 Inters. Com. Rep. 676, 683. The rate of return calculated on *Ex parte* 74 value of the railroads as a whole brought down to date, was:

	1921	1922	1923	1924	1925	1926	1927	1928
Per cent	3.2	4.0	5.1	4.9	5.5	5.8	5.1	5.5

The return on that basis in the Southern group has in most years exceeded that prescribed as fair. In the Eastern group the return has since 1924 exceeded that prescribed. In the Western groups the prescribed return appears never to have been reached. Compare Bonbright, "Economic Merits of Original Cost and Reproduction Cost," 41 Harvard Law Review, 593, 618.

³⁰ *Trunk-Line & Ex-Lake Iron Ore Rates*, 69 Inters. Com. Rep. 589, 610, 611; *Import and Domestic Rates on Vegetable Oils*, 78 Inters. Com. Rep. 421; *Grain & Grain Products from Kansas and Missouri to Gulf Ports*, 115 Inters. Com. Rep. 153, 164; *Grain & Grain Products to Eastern Points*, 122 Inters. Com. Rep. 551, 563, 564; *Lake Cargo Coal*, 139 Inters. Com. Rep. 367, 392-395. See *Rates from Atlantic Seaboard*, 61 Inters. Com. Rep. 740; *Salt from Louisiana Mines*, 66 Inters. Com. Rep. 81; *Coal to Kansas City*, 66 Inters. Com. Rep. 457; *Coal from Wyoming Mines*, 68 Inters. Com. Rep. 254; *Coal from Southwest*, 73 Inters. Com. Rep. 536; *Transcontinental Cases of 1922*, 74 Inters. Com. Rep. 48; *Canned Goods from Pacific Coast*, 132 Inters. Com. Rep. 520; *Cement in Carloads*, 140 Inters. Com. Rep. 579, 582. Compare H. W. Biklé, "Power of the Interstate Commerce Commission to Prescribe Minimum Rates," 36 Harvard Law Rev. 5, 30.

³¹ See *Smelter Products from Nevada and Utah*, 61 Inters. Com. Rep. 374; *Coal from Illinois to Arkansas, Louisiana, and Texas*, 68 Inters. Com. Rep. 1; *Coal from Kentucky, Tennessee, and West Virginia*, 68 Inters. Com. Rep. 29; *Rates from Chicago via Panama Canal*, 68 Inters. Com. Rep. 74; P.U.R.1929C.

due in large measure to the influence of competing means of transportation.³²

Sixth. Since 1914, the railroads have been obliged, to an ever increasing extent, to compete with water lines and with motors. This competition has been fostered by the Government³³ through the Panama Canal Act;³⁴ through the intra-coastal waterways acts;³⁵ through the inland waterways acts;³⁶

Grain from Illinois Points to New Orleans, 69 Inters. Com. Rep. 38; Trunk-Line and Ex-Lake Iron Ore Rates, 69 Inters. Com. Rep. 589; Sugar Cases of 1922, 81 Inters. Com. Rep. 448; Grain to Texas, 96 Inters. Com. Rep. 727; Pig Iron from Southern Points, 104 Inters. Com. Rep. 27; Grain and Grain Products from Western States, 104 Inters. Com. Rep. 272; Coal to Cincinnati, 123 Inters. Com. Rep. 561. The suspension docket for the calendar year 1928 shows that of the cases in which rates proposed by the carrier were permitted to become effective without suspension, after protest, 81 were reductions of existing rates and 93 were increases.

³² Compare F. G. Dorety, "The Function of Reproduction Cost," 37 Harvard Law Review, 173, 194.

³³ Transportation Act, Feb. 28, 1920, Chap. 91, § 500, 41 Stat. 456, 499: "It is hereby declared to be the policy of Congress to promote, encourage, and develop water transportation, service, and facilities in connection with the commerce of the United States, and to foster and preserve in full vigor both rail and water transportation." Chicago, R. I. & P. R. Co. v. United States, 274 U. S. 29, 36, 71 L. ed. 911, 47 Sup. Ct. Rep. 486. Compare Transcontinental Cases of 1922, 74 Inters. Com. Rep. 48; United States War Department v. Abilene & S. R. Co. 77 Inters. Com. Rep. 317; 92 Inters. Com. Rep. 528; Houston Cotton Exchange & Board of Trade v. Arcade & A. R. Corp. 87 Inters. Com. Rep. 392; 93 Inters. Com. Rep. 268; Reduced Commodity Rates to Pacific Coast, 89 Inters. Com. Rep. 512; Southern Class Rate Investigation, 100 Inters. Com. Rep. 513; Commodity Rates to Pacific Coast Terminals, 107 Inters. Com. Rep. 421; Consolidated Southwestern Cases, 123 Inters. Com. Rep. 203; Canned Goods from Pacific Coast, 132 Inters. Com. Rep. 520; Tinplate to Sacramento, 140 Inters. Com. Rep. 643; American Hawaiian S. S. Co. v. Erie R. Co. 152 Inters. Com. Rep. 703.

³⁴ The Panama Canal Act, Aug. 24, 1912, Chap. 390, § 11, 37 Stat. 566, now incorporated in the Interstate Commerce Act as par. 10 of § 5 (see Transportation Act, Feb. 28, 1920, Chap. 91, § 408, 41 Stat. 482), prohibits any railroad from having any interest "in any common carrier by water operated through the Panama Canal or elsewhere with which said railroad . . . does or may compete for traffic." Compare Application of United States Steel Products Co. 57 Inters. Com. Rep. 513; 77 Inters. Com. Rep. 685; 151 Inters. Com. Rep. 577.

³⁵ The Cape Cod Canal purchased pursuant to Act of Jan. 21, 1927, Chap. 47, § 2, 44 Stat. 1015, resulted in the elimination of tolls and an immediate large increase in vessel traffic. "The use of the canal under present conditions will undoubtedly operate to reduce freight rates." Report of Chief of Engineers to the Secretary of War, Oct. 2, 1928, p. 76. The Chesapeake P.U.R.1929C.

through the development of coastwise shipping by means of harbor improvements,³⁷ and through Federal aid in the construction of highways.³⁸ There has also been increased com-

and Delaware Canal was acquired and improved pursuant to Act of March 2, 1919, Chap. 95, § 1, 40 Stat. 1277, and Act of Jan. 21, 1927, Chap. 47, § 3, 44 Stat. 1016. "The opening of the canal at sea level to navigation within the limits of the dimensions authorized under the project has resulted in increasing the number and size of vessels passing through. New vessels to take advantage of the increased facilities are being constructed. Freight rates have been lowered as a result of the increased competition between carriers. Its effect on rail rates is to hold them at a minimum." Annual Report of Chief of Engineers to the Secretary of War, Oct. 2, 1928, pp. 408, 410. See Proposed Intracoastal Waterway from Boston, Massachusetts to the Rio Grande, Act of March 3, 1909, Chap. 214, § 13, 35 Stat. 822; Letters of Secretary of War transmitting to Congress letters from the Chief of Engineers on Surveys, House Doc. 391, January 5, 1912, 62 Cong. 2d Sess.; House Doc. 229, September 11, 1913, 63 Cong. 1st Sess.; House Doc. 233, September 11, 1913, 63 Cong. 1st Sess.; House Doc. 610, January 17, 1914, 63 Cong. 2d Sess.; House Doc. 1147, June 3, 1918, 65 Cong. 2d Sess.; House Doc. 238, April 12, 1924, 68 Cong. 1st Sess.; Senate Doc. 179, December 8, 1924, 68 Cong. 2d Sess.; House Doc. 586, December 14, 1926, 69 Cong. 2d Sess.

³⁶ The river improvements on the Ohio, the Mississippi, and the Warrior rivers, and the creation of the government owned Inland Waterways Corporation to operate barge lines has been followed by legislation requiring the railroads to join in through routes and joint rates and providing for differentials. Act of May 29, 1928, Chap. 891, § 3 (e), 45 Stat. 980. Although barge lines are still limited in their sphere of operation, the through routes with differentials applied for by the Inland Waterways Corporation and ordered by the Commission pursuant to the direction of Congress cover a large part of the United States. Ex parte 96, 153 Inters. Com. Rep. 129, 132. Compare Annual Report Inland Waterways Corporation, 1928.

³⁷ For an instance of the effect of harbor improvement in increasing coastwise shipping and thereby reducing rail rates, see Annual Report of the Chief of Engineers (1928) upon Miami, p. 722: "The completion of the 20-foot project has had a pronounced effect on railroad and water-transportation rates." The domestic water-borne commerce on the Atlantic, Gulf, and Pacific Coasts rose from 114,557,241 tons in 1920 to 231,530,937 tons in 1927. The tonnage on the rivers, canals and connecting channels rose from 125,400,000 in 1920 to 219,000,000 in 1927. Annual Report of the Chief of Engineers for 1928, Commercial Statistics, p. 3. On the New York state canals the tonnage increased steadily from 1,159,270 in 1918 to 2,581,892 in 1927. Commerce Year Book, 1928, Vol. 1, p. 617. The tonnage of the shipping occupied in the coastwise and internal trade increased from 6,852,000 tons in 1914 to 9,743,000 tons in 1928. Page 619.

³⁸ The competition by motor has, in large measure, been stimulated and made possible by the grants by Congress since 1914 of Federal aid to highway construction. The highways completed with Federal aid to June 30, 1928, aggregate 72,394 miles. The aggregate mileage comprised in what is P.U.R.1929C.

petition by pipe lines. Competition from other means of transportation has tended to arrest the normal increase in the volume of rail traffic; and as to some traffic it has actually produced a reduction in both the volume and the rates. It has resulted in a general shrinkage in the passenger business;³⁹ in some regions, in a lessening of the carload freight;⁴⁰ and in many, in a reduction of the volume of the less than carload freight.⁴¹

The influence of water competition on rates is strikingly illustrated by the effect of the Panama Canal on trans-continental freight rates.⁴² In order to meet this water competition carriers have repeatedly asked leave to make sweeping reductions.⁴³ Rates voluntarily established by the rail carriers are lower now, on some articles of traffic, than they were in 1914. On others they are only a little higher.⁴⁴ The influence of

designated as Federal-aid highway systems is 187,753 miles. Report of Chief of Bureau of Public Roads, Sept. 1, 1928, pp. 3, 7.

³⁹ The passenger miles per mile of road dropped gradually from 199,708 in 1920 to 141,800 in 1927; the passenger revenues from \$1,286,613,000 in 1920 to \$974,950,000 in 1927. 42 Annual Report I. C. C. Dec. 1, 1928, pp. 115, 117. This shrinkage continued throughout 1928.

⁴⁰ For an example of reduction in carload traffic, see note 45.

⁴¹ The less-than-carload freight on all the railroads of the United States shrank from 44,338,000 tons in 1923 to 38,440,000 tons in 1927. In the Eastern District (including the Pocahontas region) it shrank from 23,321,000 tons in 1923 to 19,363,000 tons in 1927. Statistics of Railways in the United States, 1927 [I. C. C.], p. XVII. This reduction has continued in 1928.

⁴² "The volume of general cargo carried in United States vessels, particularly in United States intercoastal traffic, has been increasing from year to year." Annual Report of Governor of Panama Canal for 1928, p. 12.

"Like all other western lines we feel rather severely the effect of Panama Canal competition." J. S. Pyeatt, president, Denver & Rio Grande Western Railway, Railway Age, 1926—Vol. 80.1, p. 10.

⁴³ Class and Commodity Rates for Transshipment via Panama Canal, 68 Inters. Com. Rep. 74; Reduced Rates from New York Piers, 81 Inters. Com. Rep. 312, 315; Reduced Commodity Rates to Pacific Coast, 89 Inters. Com. Rep. 512; Reduced Rates to Pacific Coast Terminals, 107 Inters. Com. Rep. 421. Compare American Hawaiian S. S. Co. v. Erie R. Co. 152 Inters. Com. Rep. 703, 705, 707.

⁴⁴ "Shortly after the opening of the Panama Canal, a rate of \$10.90 per ton was established on copper, lead, and zinc smelter products from certain far west mines to the eastern refineries for movement by rail to the Pacific Coast and thence by water through the canal. This forced a reduction in all rail rates from the same points to New York, first from \$22.50 per ton to \$16.50 per ton, and then to \$12.50 per ton which is the present rate." Brass, Bronze and Copper Ingots, 109 Inters. Com. Rep. 351, 355. Compare P.U.R.1929C.

competition by the inland waterways on the volume of rail traffic is illustrated in the effect which improvement of the Ohio river and its tributaries has had in the Pittsburg district. The rail tonnage in 1927 was materially less than in 1914, while the water tonnage more than doubled.⁴⁵ The influence of barge lines in reducing or holding down rail rates is illustrated by the rail rates in competition with those of the barge lines on the Ohio, the Mississippi and the Warrior rivers.⁴⁶ The widespread effect of competition by motor truck in lowering both

Eastbound Tariffs, San Francisco and Los Angeles to Kansas City and Chicago, Agent Countiss I. C. C. 978, July 1, 1914, with Agent Toll, March 25, 1929, I. C. C. 1209; Westbound, Kansas City and Chicago to Portland and Seattle, Agent Countiss I. C. C. 984 with Agent Toll, March 25, 1929, I. C. C. 1211; Agent Toll, I. C. C. 1209 with Agent Countiss, I. C. C. 1065; Agent Toll, I. C. C. 1206 with Agent Countiss, I. C. C. 1084; Agent Toll, I. C. C. 1210 with Agent Countiss, I. C. C. 1077; Agent Toll, I. C. C. 1211 with Agent Countiss, I. C. C. 1068. See Applications of the Southern Pacific-Atlantic S. S. Lines for fourth section relief, Nos. 13638, 13639.

A striking illustration of the effect of Panama Canal competition is furnished by the reduction in proportional rates made by the Illinois Central Railroad Company to New Orleans, May 31, 1928, on shipments via the Redwood (steamship line) to California in order to place manufacturers in the Chicago district on a parity with those in the Pittsburgh district shipping via the Atlantic seaboard. The domestic rate on iron and steel from Chicago to New Orleans was 55 cents; and the proportional rail and water rate to California had been 39½ cents. It was reduced to 31 cents, leaving the domestic rate unchanged. Tariff I. C. C. No. A-10314.

⁴⁵ In 1914, 158,327,451 tons were transported by rail and 17,601,661 by water. In 1927, 152,872,882 by rail and 39,998,562 by water. "The advantages of the utilization of the Ohio and its connecting waterways have been amply demonstrated and the rail carriers should realize that they cannot continue to handle by all rail routes much traffic which can be more economically transported by all water or rail-and-water routes. The interveners express fear that lower rates over a rail-and-water route will jeopardize the present rate structure, but assuming such fear to be well founded, that fact would not justify us in withholding approval of any plan which promises to reduce substantially the cost of necessary transportation." Construction of Branches by P. L. & W. Co. 150 Inters. Com. Rep. 43, 52, 55.

⁴⁶ The establishment of barge lines, especially when followed by the establishment of through rail and barge line routes tends both to reduce rail rates and the volume of rail tonnage. See *Inland Waterways Corporation v. Alabama G. S. R. Co.* 151 Inters. Com. Rep. 126; *Coal and Coke from Western Kentucky*, 151 Inters. Com. Rep. 543, 549; *Rates on Fertilizer, Within Florida*, 151 Inters. Com. Rep. 602, 608. Compare Vanderblue, "The Long and Short Haul Clause Since 1910," 36 *Harvard Law Review*, 426, 437. As to the development of the barge lines, see Annual Report of the Inland Waterways Corporation for 1928.

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the rates and volume of rail traffic is obvious.⁴⁷ Not obvious, but indisputable, has been the effect of the potential competition of pipe lines shown by reductions in oil rates caused by the threat of competing pipe lines.⁴⁸

Moreover, rates which are not so high as to prevent commercially the movement of traffic are often required to be lowered

⁴⁷ For instances on Boston & Maine Railroad Company, compare authority I. C. C. Nos. A-2535, 2540, 2565, 2597, 2600 with issue I. C. C. Nos. A-2556, 2657, 2600, 2654; M. D. P. U. 1706, 1717, 1719, 1728, 1729, 1730; N. H. P. S. C. 1166. Many illustrations of this are afforded by applications made under § 6 of the Interstate Commerce Act for permission, because of motor competition, to change rates on less than thirty days' notice. In the period from November 23, 1928, to March 19, 1929, six such applications were made by the Boston & Maine Railroad; five by the New York, New Haven & Hartford, and two by the Boston & Albany. In one instance the rate was reduced to less than one-half; in another to just one-half; and in the others by varying percentages. The reductions related, among others, to articles as bulky as crushed stone and lumber, and as heavy as scrap iron and wire rods. Among such applications made by western lines in 1928, are those of the Southern Pacific and Atchison for carload rates on sugar (Nos. 87,723, 87,724) and on dried fruits (86,227); and that of the Southern Pacific for carload rates on iron or steel pipe (No. 90,219).

In a paper delivered before the Mid-West Transportation Conference, R. C. Morse, general superintendent, Pennsylvania Railroad, said: "The truck has proved more economical than the box car for the transportation of less than carload freight for short hauls and, under special circumstances, for comparatively long hauls." *Railway Review*, 1925—Vol. 76, p. 1116.

In an address before the Western Railway Club, T. C. Powell, president, Chicago & Eastern Illinois Railway, said: "The great change, therefore, that has taken place since 1920 has been this growth of automobile traffic, and by this I mean not simply the ownership of automobiles, but the diversion to the passenger automobile and freight motor truck of a large number of passengers and a large tonnage of freight, respectively, of the character heretofore handled by the steam carriers, and this loss of gross-revenue producing traffic has brought about a reduction in train service on main lines as well as on branch lines, which has a very marked effect upon the number of employees engaged in train service." *Railway Review*, 1925—Vol. 77, p. 768.

For further comment on the motor bus and motor truck as competitive and auxiliary instruments of transportation, see *Railway Age*, Vol. 71.7, p. 432; Vol. 75.2, p. 995; Vol. 76.1, p. 319; Vol. 77.1, p. 275; Vol. 78.2, p. 1513; Vol. 79.2, p. 1017; Vol. 80.1, pp. 12, 547, 918; Vol. 80.2, pp. 1401, 1981; Vol. 81.1, pp. 153, 381; Vol. 81.2, p. 801; Vol. 82.2, p. 1651; Vol. 83.1, p. 601; Vol. 83.2, p. 753; Vol. 84.2, pp. 1025, 1315; Vol. 85.1, p. 399; *Railway and Locomotive Engineering*, Feb., 1928, p. 37; *Engineering News-Record*, Vol. 96.1, p. 305; *Railway Review*, Vol. 77, p. 604.

⁴⁸ *Petroleum and Petroleum Products from Oklahoma* (I. & S. 3144, April 6, 1929), 153 *Inters. Com. Rep.* —. P.U.R.1929C.

because they conflict with some statutory provision. Thus, Congress compels reduction of rates which discriminate unjustly against individuals, localities, articles of traffic or other carriers. Perhaps the most striking instance of the limitation by law of rates which the traffic would bear commercially is furnished by cases under the long and short haul clause. By that clause, a rail carrier is often obliged (unless relieved by order of the Commission) to elect between suffering practically a total loss of existing traffic between competitive points or suffering a loss in existing revenues by reducing rates at both the competitive points and intermediate noncompetitive points. The effect of this limitation upon rates, and hence upon the actual value of railroads, has become very great. Its influence has grown steadily with the growth of competition by water and motor, with the growth in the size of the individual railroad system, with the growth in the dependence of railroads for their revenues upon long-haul freight traffic and with the growing length of the average haul.⁴⁹ It has become so important for rail carriers to hold a share of the long-haul freight traffic at competitive points, that the long and short haul clause, if not relieved from, results in the carriers' giving, in large measure, to the intermediate noncompetitive points which otherwise would be subject to monopoly exactions, the full benefit of that lowering of rates required to meet the competition. The many applications for reductions made in petitions for relief from the operation of the long and short haul clause illustrate the influence of rail, as well as of water and motor, competition in thus depressing rates.⁵⁰ Congress has by that clause limited

⁴⁹ In the period from 1914 to 1927 the average freight haul for the individual railroad increased from 144.17 to 172.11 miles; and the average haul, treating all the railroads as a single system, increased from 255.43 to 314.75 miles. Annual Report of the Interstate Commerce Commission for 1928, p. 114.

⁵⁰ See e. g. Trunk-Line & Ex-Lake Iron Ore Rates, 69 Inters. Com. Rep. 539; Reduced Rates from New York Piers, 81 Inters. Com. Rep. 312, 317; Sugar Cases of 1922, 81 Inters. Com. Rep. 448; Vinegar Rates from Pacific Coast, 81 Inters. Com. Rep. 666; Pig Iron from Southern Points, 104 Inters. Com. Rep. 27; Reduced Rates on Commodities to Pacific Coast Terminals, 107 Inters. Com. Rep. 421, 436; Pacific Coast Fourth Section Applications, 129 Inters. Com. Rep. 3, 23. Compare Vanderblue, "The Long and Short Haul Clause Since 1910," 36 Harvard Law Rev. 426, 437. P.U.R.1929C.

values for rate-making purposes under § 15a, almost as effectively as by its promotion of competitive means of transportation.

Seventh. In requiring that the value be ascertained for rate-making purposes, Congress imposed upon the rate base as defined in *Smyth v. Ames*, 169 U. S. 466, 42 L. ed. 819, 18 Sup. Ct. Rep. 418, still another limitation which is far-reaching in its operation. By declaring in § 15a that the Commission shall, "In the exercise of its power to prescribe just and reasonable rates" so adjust them that upon the value a fair return may be earned "under honest, efficient, and economical management" Congress made efficiency of the plant an element or test of value.⁵¹ Efficiency and economy imply employment of the right instrument and material as well as their use in the right manner. To use a machine, after a much better and more economical one has become available, is as inefficient as to use two men to operate an efficient machine, when the work could be performed equally well by one, at half the labor cost. Such an instrument of transportation, although originally well conceived and remunerative, should, like machines used in manufacturing, be scrapped when it becomes wasteful.

Independently of any statute, it is now recognized that, when in confiscation cases it is sought to prove actual value by evidence of reproduction cost, the evidence must be directed to the present cost of installing such a plant as would be required to supply the same service. For valuation of public utilities by reproduction cost implies that "the rates permitted should be high enough to allow a reasonable per cent of return on the money that would now be required to construct a plant capable of rendering the desired service;" and does not mean "that the plant should be valued at what would now be needed to duplicate the

⁵¹ In confiscation cases the term "used and useful" had been commonly employed in making the valuations. The specific provision, requiring efficiency and economy, was doubtless inserted in § 15a because the Commission had theretofore expressed a doubt as to the extent to which it could, in determining the reasonableness of rates, consider the efficiency and economy of the management. Compare *Advances in Rates—Eastern Case*, 20 Inters. Com. Rep. 243, 278-280. This provision must be read in the light of paragraph (5) of § 20, also added to the Interstate Commerce Act by Transportation Act, 1920, which directed the Commission to prescribe what depreciation charges should be allowed as a part of the operating expenses. P.U.R.1929C.

plant precisely.”⁵² Proof of value by evidence of reproduction cost presupposes that a plant like that being valued would then be constructed. To the extent that a railroad employs instruments which are inconsistent with efficiency the plant would not be constructed; and because of the inefficient part, the railroad is obviously not then worth the cost of reconstructing the identical plant. While a part often has some service value, although not efficient according to the existing standard, its use may involve such heavy, unnecessary operating expense as to render it valueless for rate-making purposes under § 15a. The Commission when requested to consider evidence of reproduction cost must, therefore, examine the value of every part of the plant, and that of the whole plant, as compared with the value of a modern, efficient plant. Upon such consideration the Commission may conclude that the railroad is so largely obsolete in construction and equipment as to render evidence of the reproduction cost of the identical plant of no probative force whatsoever. The duty so to deal with the evidence seems to flow necessarily from the rejection by the Court of prudent investment as the measure of value and the adoption, instead, of the actual value of the property at the time of the rate hearing as the governing rule of substantive law.

The physical deterioration of a railroad plant through wear and tear may be very small as compared with a plant new, while its functional deterioration may be very large as compared with a modern efficient plant. This lessening of service may be due to any one of several causes. It may, in the first place, be due to causes wholly external. Freight terminals, originally well conceived and wisely located in the heart of a city, may have become valueless for rate-making purposes under § 15a, because

⁵² Harry Gunnison Brown, "Present Costs," p. 6. (Reprinted from Public Utilities Fortnightly, p. 237, March 7, 1929); F. G. Dorety, "The Function of Reproduction Cost," 37 Harvard Law Rev. 173, *passim*; James C. Bonbright, XL Quarterly Journal of Economics, pp. 295, 317. Compare 42 Proceedings, Am. Soc. of Civil Engineers, 1916, pp. 1719, 1772. Compare *Spokane v. Northern P. R. Co.* 15 Inters. Com. Rep. 376, 393-4; Goddard, "The Evolution of the Cost of Reproduction as the Rate Base," 41 Harvard Law Rev. 564, 572; Robinson, "Duty of a Public Utility to Serve at Reasonable Rates: The Valuation War," 6 N. C. Law Rev. 243, 256; "Railroad Valuation," by Leslie Craven, *Railway Age*, 1923—Vol. 75.2 pp. 807, 808.

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through growth of the city the expense of operating therein has become so high, or the inescapable cost of eliminating grade crossings so large, that efficient management requires immediate abandonment of the terminals.⁵³ And, even if the cost of continuing operation there is not so high as to require abandonment, the property may have for rate-making purposes a value far below its market value.⁵⁴ Compare *Minneapolis & St. L. R. Co. v. Minnesota*, 186 U. S. 257, 268, 46 L. ed. 1151, 22 Sup. Ct. Rep. 900; *Willcox v. Consolidated Gas Co.* 212 U. S. 19, 52, 53 L. ed. 382, 29 Sup. Ct. Rep. 192, 48 L.R.A.(N.S.) 1134, 15 Ann. Cas. 1034.

The lessening of the service value of a part of the railroad plant may flow from changes in the volume or character of its traffic. For economy and efficiency are obviously to be determined with reference to the business of the carrier then being done and about to be done.⁵⁵ A station warehouse for less-than-

⁵³ In a paper delivered before the Western Society of Engineers, F. J. Scarr, supervisor motor service, Pennsylvania R. Co. said: "We are conducting inefficient terminal operations through inadequate facilities, and by means of antiquated methods. . . . Before the general acceptance of the motor vehicle as a dependable means of transportation, we had only the horse drawn vehicle available for the movement of freight over the highways. The limited effective radius of action, slow speed, and low capacity, of this instrument forced the railroads to place on track freight stations as near the centers of production and consumption as possible, almost regardless of cost or future expansion requirements. This factor, with reckless competition between carriers, influenced the railroads to engage in what approaches retail transportation, by the establishing of innumerable small stations and private sidings. It is my firm conviction that had the motor truck, with its greater radius of action, greater capacity, greater flexibility, and greater endurance, been available, the carriers would have developed terminals better adapted to take advantage of these characteristics." *Railway Review*, 1926—Vol. 78, p. 790.

⁵⁴ "The time is fast approaching when railroads will stop buying expensive downtown city property for freight houses, and will, by the use of trucks, handle freight from outside and less costly freight houses direct to consignees' door.' . . . Where is the economy in hauling freight into terminals situated on the most valuable land in Chicago; and why should this same freight be hauled through Chicago's most congested district for delivery? . . . The delays in switching, due to congestion, are so costly that their elimination, if only in part, would pay very handsome dividends on a very large capital investment." *Railway Review*, 1926—Vol. 78, p. 403. See, also, *Railway Age*, Vol. 71.1, p. 21; Vol. 81.2, p. 968; *Engineering News-Record*, Vol. 96.1, p. 354.

⁵⁵ See *Advances in Rates—Eastern Case*, 20 Inters. Com. Rep. 243, 271: P.U.R.1929C.

carload freight may have become valueless for rate-making purposes, because, through motor competition the railroad had lost substantially all its less-than-carload business at that point. Large reductions in the value of passenger stations and equipment may have resulted from decline in the passenger traffic. Branch lines may lose all their service value so that they should be abandoned because motor transportation has become more efficient. On the other hand, the traffic may have grown so much as to render inefficient a part of a line originally wisely constructed with heavy grades⁵⁶ or curves.⁵⁷ In that event economy and efficiency

"Assume that a railroad is originally constructed over a mountain, it being more economical to haul the traffic up and down the steep grades than to incur the great outlay which would be required by constructing a tunnel. With the development of traffic the time comes when this mountain must be pierced, and a tunnel is accordingly constructed at a large expenditure. When the tunnel is put into service and the line over the mountain abandoned the cost of the tunnel is added and the cost of the abandoned railroad subtracted from the construction cost, so that, as shown by the books, the cost of construction is the same as though the tunnel had been built at the outset."

⁵⁶ C. A. Morse, chief engineer, Chicago, Rock Island & Pacific Railway, in an address before the Western Society of Engineers in 1926, said: "Comparatively little has been done in the reduction of grades, and today a great majority of the trunk-line railroads in this country are operating over grade lines that were considered economical 50 or 75 years ago. These railroads were built in the days before steam shovels and other mechanical grading devices had been developed and when rock was handled with hand drills, black powder, and carts. The result was that grading was very expensive and they sought to minimize it. . . . The reduction in the ruling grade and in the rate of curvature will result in both cheaper transportation and a saving in time. . . . During the last twenty-five years it has been the practice of most railroads to reduce their grades in connection with the construction of a second track, but unfortunately additional main track has been constructed on many of the older roads before the value of the lighter ruling grade was appreciated. The reduction of grade means practically the rebuilding of such lines and the expense of this together with the interruption to traffic while it is being done has prevented much of this from being carried out for unless the subject is thoroughly investigated, we are apt to consider it as impracticable. . . . Simply maintaining in first-class condition a roadway that, as far as grades and alignment are concerned, is of a type such as was constructed a half century ago, is not maintaining a modern railroad. . . . With the great majority of the railroads operating over lines that have the grade line and curvature of a half century ago the big job is to modernize the roadway." *Railway Age*, Vol. 80.1, p. 279. See also *Engineering News-Record*, Vol. 96.1, p. 309; Vol. 96.2, p. 803; *Railway Review*, Vol. 72, p. 937; Vol. 73, p. 124; Vol. 78, p. 187; *Railway Age*, Vol. 81.1, p. 181.

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will demand elimination of the grades and curves and may even require the building of tunnels or a cut-off.⁵⁷ In so far as such a condition exists, the railroad would obviously not be reconstructed with the heavy grades and curves;⁵⁸ and when con-

⁵⁷ "Curves, it is a matter of long record, have an important relation to speed of trains and cost of transportation as well as to track maintenance, while very sharp curves have a relation to safety of traffic. It has been found that in a 10-year period, with no rail renewals on 1 degree curves, the rails were renewed once on 2 degree curves, once or twice on 3 degree, and twice on 4 degree curves. Furthermore, track displacement by traffic has necessitated double or triple the amount of surfacing on the sharper curves, and there is a correspondingly greater wear on driving wheels, so that an engine working regularly over numerous sharp curves has a shorter period of service before it has to be sent to the shop for re-turning the tires. . . ." (Engineering News-Record, 1926—Vol. 96.1, p. 306.) For further comment on improvements in grades and curves, see *Railway Age*, Vol. 73.1, p. 94; Vol. 75.2, p. 1191; Vol. 78.1, pp. 502, 519; Vol. 79.1, p. 75; Vol. 81.1, p. 551; Vol. 85.1, p. 403; *Railway Review*, Vol. 77, p. 507; *Engineering News-Record*, Vol. 94.1, p. 392.

⁵⁸ "Tracks, though, are just as important as cars and locomotives in the railroads' program of reducing costs by moving heavier trains faster. The New York Central has just finished spending more than \$20,000,000 to get freight trains around Albany and across the Hudson river without having to lower them to the river level and pull them up again. The Illinois Central is spending \$16,000,000 for a straighter, flatter and more economical line through Illinois and Kentucky, crossing the Ohio river. The Southern Pacific is spending a similar sum to build its Natron cut-off in Oregon and California to get a better grade over the Siskiyou. The Central of Georgia is spending \$5,000,000 to relocate and rebuild its line between Columbus, Georgia and Birmingham. The Central of New Jersey is putting a four-track steel trestle three miles across Newark Bay, a \$10,000,000 job. The Louisville & Nashville is spending \$5,000,000 or more to raise and move its Gulf Coast line out of the reach of storms. The Southern Railway is spending a couple of millions to shorten the haul and cut the grades for coal trains moving out of the Appalachian fields to the South Atlantic. These projects represent the kind of improvement that will make it possible in the future to carry on the same line of development that American railroads have followed whenever and wherever they could. Each will pay for itself in reduced transportation costs and, along with hundreds of other improvements will make possible lower rates." *Railway Review*, 1925—Vol. 77, p. 522.

⁵⁹ If it is reasonable to expect that large amounts of heavy freight will be offered, the question of grades to be adopted is of paramount importance and should be given most careful consideration, and the lightest grades possible should be adopted, even if some increase in distance and considerable increase in cost is caused thereby, because grade and curve resistance govern the tonnage that any locomotive will haul; and as the limit in the size of the locomotive that can be built within clearances of 10 feet wide P.U.R.1929C.

sidering the reconstruction cost of the whole property that part of the line must be given merely scrap value. Compare *Kansas City S. R. Co. v. United States*, 231 U. S. 423, 58 L. ed. 296, 34 Sup. Ct. Rep. 125, 52 L.R.A.(N.S.) 1.

Perhaps the most common cause of the lessening of service value of parts of railroad plants originally well conceived and still in good physical condition is the progress in the art of rail transportation. Science and invention have wrought, since June 30, 1914, such extraordinary improvements in the types of automobiles and aeroplanes that no one would contend that the present service value of such machines should be ascertained by inquiring what their original cost was or what their reproduction cost would be. The progress since June 30, 1914, in the art of transportation by railroad has been less spectacular; but the art has been far from stagnant.⁶⁰ In railroading, as in other fields of business, the great rise in the cost of labor and

and 15 feet high has been nearly reached, we must improve our grades to secure lower costs of handling.

"As an illustration of the importance of light grades to increase train loads and thereby reduce cost of movement, we may cite the fact that about three times as much tonnage can be hauled on a grade of two tenths, or 10.6 feet per mile, as on a grade of one per cent, or 52.8 feet per mile, with the same expenditure of energy. On a grade of four-tenths only half as much tonnage can be hauled as on a level with the same power." F. S. Stevens, engineer maintenance of way, Philadelphia & Reading Railway, *Railway Review*, 1923—Vol. 72, p. 937.

⁶⁰ Alba B. Johnson, president of the Railway Business Association, testifying before the Senate Committee on Interstate Commerce in 1924, said: "The heavier locomotives and cars and the longer trains brought about a new standard of rails, road-beds, bridges, and other structures. If it were possible to show on a chart the rise in cost of replacing the railroad as a whole we would still not be telling the whole story, because the increase would represent not only a higher level of wages and prices but a change in the character of the plant. Rails and ballast are heavier, frogs and switches more powerful, bridges stronger. Capacity of track was increased by installation of signal systems. Repairs have been expedited and cheapened by new shop machinery. . . . The 90 pound rail . . . replaces a 60 pound rail. . . . Instead of replacing worn out locomotives with new ones of the same design . . . the railroad orders a type which costs more in original outlay but is expected to earn the difference by the economy with which it does the work. The same principle runs through all the schedules of maintenance of road and equipment and additions and betterments." *Railway Age*, Vol. 76.2, p. 1639. See, also, *Railway Age*, Vol. 71.2, p. 1295; *Railway Engineering and Maintenance*, Vol. 21, p. 274; *Railway Review*, Vol. 78, p. 601.
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of supplies, and the need of better service, have stimulated not only inventions but also their utilization. Through technological advances instruments of transportation with largely increased efficiency and economy have been developed. The price of lower operating costs is the scrapping of those parts of the plant which progress in the art render obsolete.⁶¹ The present greatly increased efficiency of the railroads as compared with 1920, their greatly improved credit, and their present prosperity are, in large measure, due to the advances made toward introducing the improved instruments of rail transportation which have become available.⁶² Obviously much remains to be done.

The extent of this technological progress may be illustrated by the modern locomotive. The development of the superheater, the mechanical stoker, the booster, and other devices, the increase in the size of the boiler, and other radical changes in size, weight, and design have resulted in the production of engines which are recognized by railway experts as having set such an entirely new standard of efficiency in fuel consumption,⁶³ in

⁶¹ "A glance at the operating returns of the railways of this country will show that those roads which have added most liberally to their facilities in recent years are today making the best showings." *Railway Age*, 1921—Vol. 71.2, p. 1295.

⁶² The investment account of the railroads of the United States increased between December 31, 1919 and December 31, 1927, \$5,152,751,000—that is about 25 per cent. Nearly all of that sum was expended in improving the road, terminals, and shop facilities and in replacing outworn and obsolete equipment. During that period the operating ratio improved greatly. The percentage of operating revenues consumed in the several years by operating expenses was: 1920, 94.38 per cent; 1921, 82.71 per cent; 1922, 79.41 per cent; 1923, 77.83 per cent; 1924, 76.13 per cent; 1925, 74.10 per cent; 1926, 73.15 per cent; 1927, 74.54 per cent. The improvement in the operating ratio (after the 1920 rate increase) was due in large measure to the improvement of the railroad plant. This made possible, among other things, a reduction in the number of employees from 2,022,832 in 1920 to 1,735,105 in 1927. The reduction in the operating ratio and in the number of employees has continued in 1928 and 1929. See *Monthly Labor Review*, Vol. 28, No. 5, p. 215. The number of locomotives on December 31, 1927 was 3,629 less than on December 31, 1919; the number of freight cars 48,089 less. *Annual Report of Interstate Commerce Commission for 1928*, pp. 111-114.

⁶³ "There are numerous cases where the unit fuel consumption of locomotives that represented good practice five or six years ago has been reduced almost one-half by locomotives of thoroughly modern design. This saving alone goes far toward paying a return on the additional investment." P.U.R.1929C.

tractive power,⁶⁴ and in speed⁶⁵ as to render wasteful, under many conditions, the use of older locomotives, no matter how good their condition. Statistics as to actual performances of the locomotive of to-day as compared with that built but a few years ago graphically illustrate this great advance in efficiency.⁶⁶

Its economies are compelling. But important changes in roadway and equipment are conditions of its effective use. Heavier locomotives make greater demands on the road structure which carry them. To obviate large maintenance expenses attendant upon frequent repair and replacement the roadway must be made more durable.⁶⁷ To this end rails of heavier section,⁶⁸ and of ment required to produce a thoroughly modern traveling power plant." *Railway Age*, Vol. 82.1, p. 171.

"As a result of intensive development and improvement, it is not unheard of for a modern locomotive to handle 80 per cent more ton-miles per hour on 50 per cent of the unit fuel consumption formerly considered good locomotive performance." *Railway Age*, Vol. 84.1, p. 659. See, also, *Railway Age*, Vol. 72.2, pp. 1295, 1686; Vol. 79.1, p. 256; Vol. 83.1, p. 45.

⁶⁴ Ralph Budd, president of the Great Northern Railway, in an address delivered in 1927, said: "It is just beginning to be realized that while in principle the steam locomotive is the same as it was a few years ago, the efficiency of the locomotive, as exemplified by the modern type, has been practically doubled, measured in ton-miles of transportation per unit of fuel consumed. *Railway Age*, Vol. 83.1, p. 250. See, also, *Railway & Locomotive Engineering*, Nov., 1927, p. 326; *Railway Age*, Vol. 78.1, p. 26.

⁶⁵ "By producing more ton miles of transportation per hour it reduces the total number of locomotives required; it postpones the time when increase investment in tracks and most other fixed properties to increase capacity will be necessary; it reduces the number of employees required; or that would be required in train service; it reduces the number of employees required in signaling and dispatching trains—in fact, there is hardly any form of fixed charges or transportation expenses that is not made less than it otherwise would be by locomotives that produce an increased output of ton miles per locomotive hour." *Railway Age*, Vol. 81.1, p. 493. See, also, *Engineering News-Record*, Vol. 98.1, p. 58; *Railway Review*, Vol. 74, p. 203; Vol. 78, p. 601; *Railway Age*, Vol. 83.1, p. 240.

⁶⁶ See *Transactions of American Society of Mechanical Engineers* (1921), Vol. 43, p. 334; *Railway Age*, Vol. 78.1, p. 26; Vol. 81.1, p. 487; Vol. 82.1, p. 928; Vol. 83.1, p. 322; Vol. 84.1, p. 659; Vol. 84.2, p. 1153; *Railway and Locomotive Engineering*, Feb., 1927, p. 42; Nov., 1927, p. 326; Feb., 1928, p. 41; *Railway Mechanical Engineer*, July, 1927, p. 405; *Railway Review*, Vol. 77, p. 521. Compare 15 *The Commonwealther*, No. 2 (April, 1929), pp. 14, 19.

⁶⁷ "There has been a steady development in the track structure in recent years. Rail of 75-pound and 85-pound sections have given way to that of 110-pound, 115-pound and 130-pound on many divisions; cinder ballast has been replaced by gravel and gravel by stone; stronger joints P.U.R.1929C.

increased length are adopted.⁶⁹ Anti-creepers are freely used to prevent rail movement.⁷⁰ Larger ties are selected; and they are treated to prevent deterioration.⁷¹ Ballast is made deeper and heavier; and of gravel or stone rather than of cinders.⁷² Bridges are of stronger construction.⁷³ And to facilitate the movement of traffic, watering stations⁷⁴ and automatic signals⁷⁵

have been installed and more tie plates, rail anchors, and other accessories used. At the same time and in spite of these improvements the impression remains among those most directly in touch with maintenance work that the roads can still afford to go much further in this direction with economy." *Railway Engineering and Maintenance*, 1926—Vol. 22, p. 174. See, also, *ibid* p. 190.

⁶⁹ Rail of 85-pound section or lighter was the type most commonly used prior to 1914. *Railway Age*, 1921—Vol. 70.2, p. 998. 68.8 per cent of the 2,806,930 tons of rail rolled in the United States in 1927 was of 100-pound section or heavier. *Railway Age*, 1928—84.2, p. 900. See, also, *Railway Age*, Vol. 71.1, p. 413; Vol. 78.1, p. 181; Vol. 79.1, p. 393; *Railway Review*, Vol. 74, p. 101.

⁷⁰ "The American Railway Association has announced that new specifications increasing the length of standard rails from 33 to 39 feet have been approved by that organization. This change will result in a 16 per cent reduction in the number of rail joints and a saving of about one-sixth of the total of bolts, nuts, angle bars, and spring washers now required." *Engineering News-Record*, 1925—Vol. 95.2, p. 816.

⁷¹ "The rail anti-creepers thus saved 26,400 hours of labor on this 30-mile stretch in one year entirely aside from the saving arising from the lessening of damage to rail, fastenings, and equipment caused by wide expansion and uneven line and surface where the rail was permitted to creep. As a result of the test the entire track was securely anchored and the practice inaugurated of anchoring all double track and whatever single track showed a tendency to creep." *Railway Engineering and Maintenance*, 1923—Vol. 19, p. 114.

⁷² See *Engineering News-Record*, 1925—Vol. 94.2, p. 844; *Railway Engineering and Maintenance*, 1926—Vol. 22, p. 15.

⁷³ See *Engineering News-Record*, 1925—Vol. 94.2, p. 674; Vol. 95.2, p. 958; *Railway Age*, 1928—Vol. 84.1, p. 3.

⁷⁴ In noting that the Chicago & Northwestern Railway is replacing a bridge which, "while still as good as the day it was built," is too light for the heavier loads now being carried, the *Railway Age* observes, "This is characteristic of many units of railway construction which, if properly maintained, show little or no evidences of wear but must give way just as truly as though they wore out." (1924—Vol. 77.2, p. 918.)

⁷⁵ "More efficient pumping equipment is rapidly replacing antiquated machinery." *Railway Engineering and Maintenance*, 1926—Vol. 22, p. 132. See, also, *Railway Age*, 1928—Vol. 84.2, p. 1329.

⁷⁶ "The improvement in equipment and in methods of locating signals to meet the requirements of modern train operation, have to a great extent rendered obsolete much of the automatic signaling placed in service twenty years or more ago." *Railway Age*, 1927—Vol. 83.2, p. 1144.

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of improved design are introduced. Moreover, the effective employment of the modern locomotive involves ordinarily the use of larger cars of steel construction, displacing the wooden car of small capacity with which so many of the railroads were equipped in 1914.⁷⁶ Engine terminals and car-shops built prior to 1914 are, in many cases, inadequate⁷⁷ for the efficient and economical handling, housing, and repairing of the modern locomotives and cars, and must be replaced to prevent curtailment of the productive capacity of the rolling stock by needless idle hours while awaiting service or repair.⁷⁸ And the waste incident

⁷⁶ "An investigation made by one railroad a few years ago disclosed the fact that the retirement of a large number of cars of all-wood construction, and their replacement with new cars of steel or steel underframe construction, would effect a saving in maintenance alone which in five years it was estimated would amount to about 68 per cent of the entire cost of the new equipment. . . . A thorough study of the economics of freight car maintenance and operation today would lead to equally startling conclusions with respect to the 300,000 or 400,000 weak and unsuitable freight cars which are still in service." *Railway Age*, 1921—Vol. 71.1, pp. 52, 53. See, also, *Railway Age*, Vol. 70.1, p. 490; Vol. 72.2, p. 1515; Vol. 73.2, p. 645; Vol. 74.2, p. 989; Vol. 75.2, p. 1023; Vol. 78.2, p. 1443; Vol. 79.1, p. 186; Vol. 80.1, p. 462; Vol. 80.2, p. 1301; Vol. 82.2, p. 1556; Vol. 85.2, p. 916; *Railway Review*, Vol. 72, p. 1073; Vol. 77, p. 522; Vol. 78, p. 767.

⁷⁷ "The advent of the overhead, electric traveling crane, as well as the modern smoke exhausting devices and other such improvements, have thrown many of the older type buildings into the obsolete class. . . . It is very difficult to add modern facilities to an existing plant which is designed and constructed without the contemplation of such added facilities. . . . It is impossible to install crane runways and other labor saving devices in existing buildings, due to lack of clearance and insufficient strength in the existing structures." *Railway Review*, 1921—Vol. 68, pp. 449, 450.

"The enlargement of locomotive terminal facilities and the modernization of locomotive terminal equipment is admittedly the most needed physical improvement in the railway structure of today . . . there are many railways on which the locomotive terminals have received practically no improvements for more than fifteen years." *Railway Review*, 1924—Vol. 74, p. 151.

"These are days of rapid improvement in methods, in which many facilities become obsolete long before their normal service life has been reached. This is particularly true of terminal facilities." *Railway Age*, 1927—Vol. 83.2, p. 966. See, also, *Railway Age*, Vol. 66.2, p. 994; Vol. 68.2, p. 1702; Vol. 69.2, p. 729; Vol. 71.2, p. 890; Vol. 76.1, pp. 269, 314; Vol. 76.2, p. 1494; Vol. 78.2, p. 1071; Vol. 83.1, p. 249; *Railway Review*, Vol. 72, pp. 112, 495; Vol. 77, p. 522.

⁷⁸ "The real terminal problem, therefore, is that of providing facilities that will enable the railways to effect some reduction in the enormous investment in idle locomotives now held at terminals." *Railway Review*, P.U.R.1929C.

to shop-tools and machinery long since rendered obsolete by progress in the art must be stopped.⁷⁹

Thus, the efficient post-war railroad plant differs widely even from the efficient one of 1914. That during the recapture period here in question the plants of most of the railroads of the United States built before the War were lacking in improved instruments of transportation made available by recent progress in the art is of common knowledge.⁸⁰ That this is true even today of many of the railroads will not be denied.⁸¹ To the extent that

1923—Vol. 72, p. 176. See, also, *Railway Review*, Vol. 70, p. 344; *Railway Age*, Vol. 68.2, p. 1745; Vol. 74.2, p. 1354; Vol. 75.2, p. 1141.

⁷⁹ "It is said that 'any machine that will run' is good enough for a railroad shop and while most railroad men realize the falsity of this statement, it is seemingly borne out by the large number of obsolete, worn-out machines now in use." *Railway Age*, 1921—Vol. 71.1, p. 1.

"Without doubt, railroad net earnings are appreciably reduced by the many obsolete and inefficient machines now used in railroad shops and enginehouses." *Railway Age*, 1923—Vol. 74.1, p. 211.

"The tools to be seen on any trip of inspection through your own shops or those of other roads, are in many cases a generation outgrown." *Railway Review*, 1924—Vol. 74, p. 733. To the same effect, see *Railway Age*, Vol. 67.2, p. 1101; Vol. 69.1, p. 90; Vol. 70.1, p. 222; Vol. 72.2, p. 1205; Vol. 74.2, p. 1082; Vol. 74.2, pp. 1082, 1351; Vol. 81.2, p. 629; Vol. 83.2, p. 706; Vol. 85.1, p. 599.

⁸⁰ "Little attention is ordinarily given to obsolescence or the economy of replacement with more modern equipment solely because of the reduced cost of operation with the newer units. In their failure to appreciate this principle the railways trail far behind many of the utilities with the result that they are paying the penalty in high operating costs. . . . The engineering and maintenance of way department is cluttered with equipment that it cannot afford to operate." *Railway Engineering and Maintenance*, 1926—Vol. 22, p. 2. To the same effect, see *Railway Age*, Vol. 81.2, p. 621, p. 1001; *Railway Review*, Vol. 68, p. 784.

"Our railroads were built for the locomotive of the past. They were and are operated in accordance with the locomotive of the past. . . . It remains to do on railroads the things manufacturers have done—to build better locomotives, improve old ones and to operate them according to the new conditions these improvements themselves have created." *Railway Age*, 1922—Vol. 72.1, p. 178. See, also, *Transactions, American Society of Mechanical Engineers* (1919), p. 999; *Railway Review*, Vol. 70, p. 43; *Engineering News-Records*, Vol. 98.1, p. 58; *Railway Age*, Vol. 69.2, p. 729; Vol. 76.1, p. 269; Vol. 79.1, pp. 256, 505; Vol. 81.1, pp. 45, 123, 492; *Mechanical Engineering*, Vol. 43.1, p. 311; *Railway Engineering & Maintenance*, Vol. 22, p. 2.

⁸¹ In 1920 there were 68,942 locomotives in use on American Railways. (41st Annual Report of the Interstate Commerce Commission, p. 107). Of these 12,000 were reported to be obsolete by the *Railway Age* (Vol. 63.1, P.U.R.1929C.

there is inefficiency in plant, there was and is functional depreciation, lessening actual value. That this functional depreciation, arising through external changes, through competitive means of transportation, and through progress in the art of transportation, may, in respect to a particular railroad, have become so large as to more than counter-balance that increase in its actual value which would otherwise flow from the rise in the price level since 1914, seems clear.

It may be urged that the continued use of the inefficient plant⁵² and the repairing rather than replacement of its antiquated parts,⁵³ has been due to lack of capital and insufficient

p. 33). Of the 2,648 locomotives in service on the Baltimore & Ohio, on December 31, 1920, 633 were more than twenty years old. On the Southern, 501 locomotives out of a total of 1,865; on the Erie, 474 out of 1540; on the Seaboard Air Line, 142 out of 581; on the Lackawanna, 57 out of 757; and on the Pennsylvania, 624 out of a total of 7,599, exceeded that age. In 1926 it was estimated by the editor of the *Railway Age* that 68 per cent of the locomotives then in use were over ten years old. (*Railway Age*, Vol. 81.1, p. 493.) In 1928 there were about 65,000 locomotives in use. Of these, according to the *Railway Age* (Vol. 84.2, p. 950): "There are probably between 15,000 and 20,000 locomotives in this country, twenty years old or older, which have practically none of those features of locomotive equipment that are now regarded as the ear-marks of modern motive power."

⁵² e. g. Locomotives no longer capable of pulling heavy loads, instead of being scrapped or rebuilt, have frequently been continued in use for branch-line or suburban service; or in switch-yards. It is said that their use in such passenger service has been rendered wasteful by the comparative economies of the modern motor rail-car. See *Railway Age*, Vol. 72.1, p. 315; 72.3, p. 1372; Vol. 76.2, p. 975; Vol. 82.1, p. 563; Vol. 83.1, p. 601; Vol. 84.1, p. 753; *Railway and Locomotive Engineering*, Feb., 1928, p. 37. And "just what measure of economy is effected by retaining locomotives in yard and work train service after their condition has become such that they are no longer capable of performing their assigned duties in road service, is not apparent, to say the least." *Railway Review*, 1924—Vol. 74, p. 771. The replacement of antiquated power with modern locomotives in its switch-yards by the Seaboard Air Line Railway, is estimated to have effected a saving in operating costs which will pay an annual return of 50 per cent on the investment in the new engines. *Railway Age*, 1927—Vol. 83.1, p. 45. See, also, *Railway Age*, Vol. 79.1, p. 209; *Railway Review*, Vol. 75, p. 396.

⁵³ "There is too much tendency to patch up and perpetuate an obsolete, inadequate, and uneconomical unit of equipment rather than to retire it and purchase new equipment to derive the benefit of the advanced state of the art in building." F. H. Hardin, assistant to the president, New York Central Railway. (*Railway Age*, 1926—Vol. 81.2, pp. 670, 671.) To the same effect, see *Transactions, American Society of Mechanical Engineers*, 1925—Vol. 47, p. 179; *Railway Review*, Vol. 78, pp. 195, 271.

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revenues.⁸⁴ Such an excuse for failing to install the improved plant might have been conclusive if prudent investment had been accepted as the measure of value. But the fact that the management may have been wholly free from blame in continuing to use the inefficient parts obviously does not add to their actual value. The actual value of an existing plant, and the difference between its value and the present cost of constructing a modern efficient plant which will render the service, is precisely the same whether the continued use of the obsolete part was due to lack of capital, or to lack of good judgment, or to somnolence on the part of the management. As was said in *Public Utility Comrs. v. New York Teleph. Co.* 271 U. S. 23, 32, 70 L. ed. 305, P.U.R. 1926C, 740, 746, 46 Sup. Ct. Rep. 363: "Customers pay for service, not for the property used to render it." Only the then service value of the property is of legal significance under the rule of *Smyth v. Ames*, 169 U. S. 466, 42 L. ed. 819, 18 Sup. Ct. Rep. 418.

It may also be urged that such functional depreciation of the railroad plant since 1914 is allowed for in the depreciation customarily estimated by the Commission. But this is not true. Functional depreciation prior to June 30, 1914, was included when valuing as of that date the then property of the railroads. But the instructions of the Commission provided that functional depreciation arising after that date should not be considered unless "imminent." And the Commission made clear that it did not intend by the term to include functional depreciation of the character described above arising from external causes, from the competition of new methods of transportation, from the extraordinary urban growth, from the need of new economies arising

⁸⁴ Samuel Rea, president of the Pennsylvania Railroad, in an address before the eastern division of the U. S. Chamber of Commerce delivered in 1923, said: "From an engineering viewpoint there are many improvements which could be adopted, or the present use of which could be greatly extended, and which would very materially increase the efficiency and reduce the cost of railroad operation. The initial installations, however, would require the investment of very large sums of money, and it is difficult to see how these sums can be raised. . . ." *Railway Review*, Vol. 74, pp. 262, 263. To the same effect, see statement of R. H. Aishton, president. American Railway Association. *Railway Review*, 1921—Vol. 68, pp. 783, 784.

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from the largely increased labor and fuel costs, and from other incidents of the war and post-war developments in industry and transportation. *Texas Midland R. Co.* 75 *Inters. Com. Rep.* 1, 47-52, 124-130. Compare, *Depreciation Charges of Steam Railroads*, 118 *Inters. Com. Rep.* 295.⁸⁵

If weight is to be given to reproduction cost in making the valuation of any railroad for rate-making purposes under § 19a and § 15a, there must be a determination of the functional depreciation of the individual plant as compared with a modern, efficient plant adequate to perform the same service. To make such a determination for any railroad involves a detailed inquiry into the character and condition of all those parts of the plant which may have reduced functional value because of the post-war changes affecting transportation above referred to, and also into the character and the volume of the carrier's business. For the efficient plant means that plant which is economical and efficient for the particular carrier in view of the peculiar requirements and possibilities of its own business. To make such a determination justly, the Commission must have the data on which a competent and vigilant management would insist when required to pass upon the advisability of making capital expenditures. And the Commission would be obliged to give them the same careful consideration. The determination of the extent of functional depreciation is thus a very serious task; a task far more serious than that of determining merely physical depreciation.

To make such a determination of functional depreciation annually for each of the railroads of the United States would be a stupendous task, involving, perhaps, prohibitive expense. To make the necessary decisions promptly would seem impossible, among other reasons, because railroad valuation is but a small part of the many duties of the Commission. On the other hand, to adjust rates so as to render a fair return, and to provide through the recapture provision funds in aid of the weaker railroad, are tasks which Congress deemed urgent; and which must

⁸⁵ e. g. "With respect to account No. 3, 'Grading,' it appears that the retirement of grading is a contingency sufficiently remote in most cases so that it is not practicable to treat it as depreciable property." (118 *Inters. Com. Rep.* 295, 362.)

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be promptly performed if its purpose is to be achieved. Obviously Congress intended that in making the necessary valuations under § 15a a method should be pursued by which the task which it imposed upon the Commission could be performed. Compare *New England Divisions Case*, 261 U. S. 184, 197, 67 L. ed. 605, 43 Sup. Ct. Rep. 270. Recognizing this, the Commission construed § 15a as it had paragraph (f) of § 19a. That is, as permitting the Commission to make a basic valuation as of some general date (June 30, 1914, was selected); and to find the value for any year thereafter by adding to or subtracting from the 1914 value the net increases or decreases in the investment in property devoted to transportation service as determined from the carrier's annual returns with due regard to the element of depreciation.⁶⁶

Eighth. The significance, in connection with current reproduction costs, of the requirement in § 15a that value be ascertained "for rate-making purposes" as there defined becomes apparent when the position of railroads, in this respect, is compared with that of most local utilities enjoying a monopoly of a necessary of life. The fundamental question in the *Southwestern Bell Case*, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923B, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807, was one of substantive constitutional law, namely: Is the rate base on which the Constitution guarantees to a public utility the right to earn a fair return the actual value of the property at the time of the rate hearing or is it the cost or capital prudently invested in the enterprise? The Court decided that the rate base is the actual value at the time of the rate hearing. That proposition of substantive law the Commission undertook to apply to the facts presented in the case at bar. Recognizing that evidence of increased reconstruc-

⁶⁶ "Upon the completion of the valuation herein provided for the Commission shall thereafter in like manner keep itself informed of all extensions and improvements or other changes in the condition and value of the property of all common carriers, and shall ascertain the value thereof and shall from time to time, revise and correct its valuations, showing such revision and correction classified and as a whole and separately in each of the several States and territories and the District of Columbia which valuation, both original and corrected, shall be tentative valuations and shall be reported to Congress at the beginning of each regular session."

Compare Frederick K. Beutel, "Due Process in Valuation of Local Utilities," 13 *Minnesota Law Review*, 409, 426, 427.
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tion costs is admissible for the purpose of showing an actual value greater than the original cost or the prudent investment, it found in respect to some of the carrier's property that the evidence of enhanced reconstruction cost was persuasive of higher present value. As to the rest of the property, it held that the evidence was neither adequate nor persuasive.

Of both railroads and the local utility it is true, under the rule of substantive law adopted in the *Southwestern Bell Case*, *supra*, that value is the sum on which a fair return can be earned consistently with the laws of trade and legal enactments. But the operative scope upon railroads of the limitations so imposed upon the rates, and hence upon values, is much greater than in the case of local utilities.⁸⁷ Rail rates are being constantly curbed by the competition of markets and of rival means of transportation. Rail rates are curbed also by the influence of high rates upon the desires of individuals. The public can, to a considerable extent, do without rail service. If the rates are excessive, traffic falls off. Thus, when passenger rates are too high, travel is either curtailed or people employ other means of transportation. But the service rendered by a local water company in a populous city is practically indispensable to every inhabitant. There can be no substitute for water and to escape taking the service is practically impossible; for an alternative means of supply is rarely available. Even the common business incentive of establishing low prices in order to induce an enlarged volume of sales is absent; since the volume of the business done by a water company will not be appreciably affected by a raising or lowering of the rates, except in so far as water in quantity is used for manufacturing purposes. In other words, the commercial limitation upon rates—what the traffic will bear—is to a large extent absent in the case of such a local monopoly. The city water user must submit to such rates as the utility chooses to impose, unless they are curbed by legislative enactment.

The legal limitations upon rates (so potent in the case of railroads) are, in the main, inoperative in the case of such a water company. Rail rates are sometimes held illegal because

⁸⁷ Compare "Railroad Valuation" by Leslie Craven, counsel, Western Group, [Railroad] Presidents' Conference Committee on Federal Valuation of Railroads, 9 Amer. Bar. Assn. Journal, 681, 683, 684. P.U.R. 1929C.

the exaction is greater than the value of the service to the shipper. There is in fact no corresponding limitation upon water rates. The charge is so small, as compared with the inconvenience which would be suffered in doing without the service, that the worth to the water taker could rarely be doubted. The prohibition of discrimination against persons, places, or articles of commerce, which so frequently interferes to prevent railroads from charging higher rates, although the traffic would easily bear them, affords no protection to city water users; and seldom causes a loss of revenue to the water company. There is in respect to the water rates no prohibition comparable to that embodied in the long and short haul clause, which has an important effect in limiting rail rates. Hence, under the rule of substantive law declared in the Southwestern Bell Case, *supra*, practically the only limitation imposed upon water rates is the denial to the utility of rates which will yield an excessive return upon the actual value of the property. In applying that rule of substantive law, the then actual cost of reproducing the plant would (assuming it to be efficient) commonly be persuasive evidence of its actual value, as the current cost of reproducing the vessel was held to be in *Standard Oil Co. v. Southern P. Co.* 268 U. S. 146, 156, 69 L. ed. 890, 45 Sup. Ct. Rep. 465.

It is true that in the Southwestern Bell Case, *supra*, the Court passed also upon a subsidiary question—the weight and effect of the evidence of reconstruction cost. But the question of adjective law arose upon a record very different from that in the case at bar; and the action of the Commission here is entirely consistent with that decision. In the Southwestern Bell Case, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923C, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807, direct testimony as to the then value of the property was introduced. The efficiency of the plant was unquestioned. Witnesses had testified both to the actual cost of constructing identical property at that time; and that the specific property under consideration was worth at least 25 per cent more than the estimate of the State Commission. The Court believed those witnesses. Concluding that this direct and uncontradicted evidence had been ignored by the State Commission because of error as to the governing rule of substantive law, this Court set aside the rate order as confiscatory, saying: “We P.U.R.1929C.

think the proof shows that for the purposes of the present case the valuation should be at least \$25,000,000." (*supra*, 262 U. S. 276, 288, at p. 199 of P.U.R.1923C.)

The action of the Commission in the case at bar was consistent also with *McCardle v. Indianapolis Water Co.* 272 U. S. 400, 71 L. ed. 154, P.U.R.1927A, 15, 47 Sup. Ct. Rep. 144, and *Bluefield Water Works & Improv. Co. v. Public Service Commission*, 262 U. S. 679, 67 L. ed. 1176, P.U.R.1923D, 11, 43 Sup. Ct. Rep. 675. Each of these water companies enjoyed a local monopoly of an indispensable service. In order to provide a substitute, the community would have either to take the utility's property by eminent domain; or, if it was free to do so, build a competing plant. There was practically no commercial limitation upon the earning power of these water companies except the extent of the local market; and practically no legal limitation except the requirement that the rates charged should not be so high as to yield an excessive return upon the actual value of the utility's property. The current cost of constructing then a plant substantially like the utility's (assuming it to be efficient) would be persuasive evidence of its actual value. For upon that issue, concerning a local water monopoly, the inquiry would naturally be: How much would it cost the community to substitute for the private monopoly a publicly owned plant? But evidence of the cost of reconstructing a railroad built before 1914 might, for the reasons stated above, be no indication whatever of its post-war value for rate-making purposes under § 15a. And where, as in the case at bar, the probative force of the evidence may be considered free from any question of confiscation, the rule declared in *Ohio Valley Water Co. v. Ben Avon*, 253 U. S. 287, 64 L. ed. 908, P.U.R.1920E, 814, 40 Sup. Ct. Rep. 527, which requires in confiscation cases a judicial determination on the weight of the evidence, does not apply.

Ninth. A further question of construction requires consideration. It is suggested that, even if the Commission is not required to give effect to the higher price level when finding values for rate-making purposes under § 15a, it must do so when fixing the amount of the excess income to be recaptured from a particular railroad under paragraphs 6 to 18. The language of the section affords a short answer to that contention. The valuation P.U.R.1923C.

prescribed in paragraph 4 is declared to be "for the purpose of this section"—that is, for recapture purposes as well as for rate making. And paragraph 6, which provides for the recapture, declares: "The value of such railway property shall be determined by the Commission in the manner provided in paragraph (4)."

The recapture of excess earnings and the establishment of reserves are a part of the process of establishing such rates "that carriers as a whole (or as a whole in each of such rate groups or territories as the Commission may from time to time designate) will, under honest, efficient, and economical management . . . earn an aggregate annual net railway operating income equal, as nearly as may be, to a fair return upon the aggregate value of the railway property of such carriers held for and used in the service of transportation." (par. 2.)

The recapture and reserve are the readjustment made necessary:

"Inasmuch as it is impossible (without regulation and control in the interest of the commerce of the United States considered as a whole) to establish uniform rates upon competitive traffic which will adequately sustain all the carriers which are engaged in such traffic and which are indispensable to the communities to which they render the service of transportation, without enabling some of such carriers to receive a net railway operating income substantially and unreasonably in excess of a fair return upon the value of their railway property held for and used in the service of transportation, it is hereby declared that any carrier which received such an income so in excess of a fair return, shall hold such part of the excess, as hereinafter prescribed, as trustee for, and shall pay it to, the United States." (par. 5.)

Thus, the direction in the order here challenged to pay or reserve the excess over 6 per cent of the amounts earned from 1920 to 1923 by rates established pursuant to Ex parte 74, Increased Rates, 1920, 58 Inters. Com. Rep. 220, is merely a readjustment of those rates.

Tenth. The question remains whether the Commission, in valuing the structural property acquired before June 30, 1914, abused its discretion by declining to give effect to the evidence P.U.R.1929C.

of enhanced reconstruction cost.⁸⁸ The O'Fallon insists that the Commission, in fact, adopted a mathematical formula; that it declined to determine the present value of the carrier's property in accordance with "the flexible and rational rule of *Smyth v. Ames*, 169 U. S. 466, 42 L. ed. 819, 18 Sup. Ct. Rep. 418, under which value is a matter of judgment to be determined by a consideration of all relevant facts and circumstances;" that it erected "an arbitrary standard of its own based on no relevant facts;" that if it had given consideration to all relevant facts and circumstances, including as one its cost of reproduction at current prices, "the value found must have been substantially higher;" and that its primary purpose was to determine the amount of the investment in the carriers' property. In short, the O'Fallon asserts that the Commission refused to find actual value; and instead, found the prudent investment.

In support of this assertion, the O'Fallon points to the statement in the report that: "The value of the property of railroads for rate-making purposes . . . approaches more nearly the reasonable and necessary investment in the property than the cost of reproducing it at a particular time." (p. 41 of 124 Inters. Com. Rep.) The statement just quoted does not mean that the Commission accepted prudent investment as a measure of value. It means merely that the Commission deemed the estimated original cost a better indication of actual value than the estimated reconstruction cost. While this Court declared in the *Southwestern Bell Case*, 262 U. S. 276, 67 L. ed. 981, P.U.R.1923C, 193, 43 Sup. Ct. Rep. 544, 31 A.L.R. 807, that prudent investment is not to be taken as the measure of value, it has never held that prudent investment may not be accepted as evidence of value, or that a finding of value is necessarily erroneous if it happens to be more nearly coincident with what may be supposed to have been the cost of the property than with

⁸⁸ The nature of the order here challenged is described in the report which accompanied it: "At the outset it is to be borne in mind that in no sense can these proceedings properly be treated as lawsuits. No issue is raised between parties. There is no controversy between disputants, each contending for protection of its rights. They are purely administrative proceedings wherein we are following the direction of Congress to create a contingent fund to be used in furtherance of the public interest in railway transportation." *Excess Income of St. Louis & O'Fallon R. Co.* 124 Inters. Com. Rep. 3, 7.

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its estimated reproduction cost. The single-sum values found by the Commission do not coincide either with the estimated prudent investment or with the estimated reconstruction cost. They are much nearer the estimated original cost of the property than they are to its estimated reproduction cost. But the values found do not conform to any formula.⁸⁹

The general method pursued by the Commission in reaching its conclusion closely resembles that approved by the Court in *Georgia R. & Power Co. v. Railroad Commission*, 262 U. S. 625, 629, 630, 67 L. ed. 1144, P.U.R.1923D, 1, 43 Sup. Ct. Rep. 680. It appeared that the O'Fallon Railroad had been constructed long prior to June 30, 1914. The Commission had before it "the cost of reproduction new of the structural portion of this property estimated on the basis of our 1914 unit prices, coupled with the knowledge that costs of reproduction so arrived at were not greatly different from the original costs." As bearing upon the value of those parts of the railroad's property which were added or replaced later the Commission had the actual cost. As bearing on the then value of the railroad land it had current values of adjacent lands. It had evidence concerning the railroad and the character and volume of its traffic, the working capital, revenues, and expenses. It had evidence of increased price levels after 1914 and estimates of current reproduction costs during the recapture periods.

The carrier insisted that physically the property had appreciated more than it had depreciated; and urged the Commission to take as the basic measure of value the "cost of reproduction new at current prices to the exclusion of everything else, or at least of everything that might tend to a lower value." (124 Inters.

⁸⁹ The O'Fallon has calculated that the single-sum values found by the Commission for the several recapture periods exceed by \$32,660.88 the sums of the following amounts: (1) the cost of reproduction less depreciation, as of June 30, 1919, of all property exclusive of lands and working capital at 1914 or pre-war prices; (2) the amount by which the actual cost of the property installed between July 1, 1914, and June 30, 1919, exceeded its cost of reproduction at 1914 prices; (3) the present value of the land; (4) the allowance for working capital; (5) the actual investment in additions and betterments, less retirements, subsequent to June 30, 1919. The calculation is correct; but the assertion that the \$32,660.88 (which is about 5 per cent of the aggregate of the other amounts) must have been allowed as overhead is without foundation in the record and is inconsistent with statements in the Commission's report. P.U.R.1929C.

Com. Rep. 3, 28.) This the Commission declined to do. It gave full effect to increased current market values in determining the value of the land. It gave to the additions and betterments made after June 30, 1914, a value approximating their cost less physical depreciation.⁹⁰ But, in respect to structural property and equipment acquired before June 30, 1914, it declined to give weight to the evidence introduced to show current reproduction costs greater than those of 1914. It concluded, despite the estimates of higher reconstruction costs, that, except for the additions, the actual value of this part of the O'Fallon Railroad had not increased; and it found the single sum value for rate-making purposes in 1920 to be \$856,065; in 1921, \$875,360; in 1922, \$978,874; in 1923, \$978,246.

The Commission recognized, as stated in *Minnesota Rate Cases*, 230 U. S. 352, 434, 57 L. ed. 1511, 33 Sup. Ct. Rep. 729, 48 L.R.A.(N.S.) 1151, Ann. Cas. 1916A, 18, that the determination of value is "not a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all relevant facts." *Georgia R. & Power Co. v. Railroad Commission*, 262 U. S. 625, 630, 67 L. ed. 1144, P.U.R.1923D, 1, 43 Sup. Ct. Rep. 680. It states that "it considered and weighed carefully, in the light of its own knowledge and experience, each fact, circumstance, and condition called to its attention on behalf of the carrier" as well as the evidence otherwise introduced; and that "from this accumulation of information we have formed our judgments as to the fair basic single-sum values, not by the use of any formula but after consideration of all relevant facts." The report makes clear that its finding was the result of an exercise of judgment upon all the evidence; that the Commission accorded to the evidence of reconstruction cost all the probative force to which it deemed that evidence entitled on the issue of actual value; and that it considered, as bearing upon value, not only the probable cost and the estimated reproduction cost, but also "descriptions of the carrier, of its

⁹⁰ "The method which we, therefore, find logical and proper for determining the value in the subsequent recapture periods is to add to or subtract from the 1919 value the net increases or decreases in the investment in property devoted to transportation service as determined from the carrier's returns to valuation order No. 3, with due regard to the element of depreciation." 124 Inters. Com. Rep. 3, *passim*, particularly pp. 37, 42. P.U.R.1929C.

traffic, of the territory in which it operates, its history, and summaries of the results of its operation." (p. 25 of 124 Inters. Com. Rep.)

The difficulties by which the Commission was confronted when requested to apply the evidence of reproduction cost can hardly be exaggerated. In the first place, the evidence was of such a character that it did not satisfactorily establish what would have been the current cost of reproduction during the recapture periods.⁹¹ During the years here in question there was practically no construction of new lines.⁹² Thus, the current cost of reproduction for those years had to be obtained by using index figures as the basis for a guess as to what it would cost to build then the identical railroad. To give to such figures effect as proving what it would then have cost to reproduce the O'Fallon Railroad, it must be assumed that there had not been introduced

⁹¹ As to the evidence the Commission said: "The use of cost of reproduction is by no means free from practical difficulties. For example, the record here shows that there was a dearth of reliable data from which an accurate estimate of such cost could be made for the period 1920 to 1923. In proof of this assertion reference need only be made to the sources of the data relied upon by the witnesses both for the bureau and for the carriers. Their estimates for those years were founded in large part upon manufacturers' records and price statistics appearing in various publications, and to a lesser extent upon cost of construction actually incurred by railroads in that period. There was, in fact, very little new railroad construction in those years.

"Synthetic estimates of cost of reproduction based upon statistics showing price and wage changes do not make allowance for improved methods of assembly and construction. As will hereinafter be more fully indicated, we found in Texas Midland Railroad [75 Inters. Com. Rep. 1] at page 140, that the increase in the cost of labor and materials between 1900 and 1914 was largely offset by improvement in the art of construction. How far there may have been a similar offset, so far as costs in the period from 1920-1923 are concerned, is not disclosed of record." (p. 29 of 124 Inters. Com. Rep.)

And later (p. 41): ". . . even if the cost of reproduction new in 1920 were to be regarded as a controlling element there is not in the present record evidence showing what it might have cost to reproduce the property of the O'Fallon at that time. The only evidence in this respect is that of the relation of general prices in 1914 and in 1920 and the other recapture years."

⁹² Compare *United States v. Boston, Cape Cod & N. Y. Canal Co.* 271 Fed. 877, 889, where the Court said that the jury "should not consider the evidence of reconstruction cost upon the question of value, unless they were satisfied that a reasonably prudent man would purchase or undertake the construction of the property at such a figure."

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since June 30, 1914, new cost-saving methods of construction which would overcome, in whole or in part, the effect of the higher price level upon the cost of reproducing the identical property. This, in view of its experience, the Commission properly declined to do.⁹³ In the second place there was a lack of evidence to show to what extent, if any, higher reconstruction cost, in the several recapture periods, implied a value higher than that theretofore prevailing.⁹⁴ The Commission believed that it could act only on proof; that it was not required or permitted to base findings on conjecture; and that to assign, under the circumstances, any weight to the evidence of reconstruction cost would be mere conjecture.

Moreover, the Commission had, through its valuation department, special knowledge of the property of this carrier. It had acquired necessarily in the performance of its many duties the general knowledge, already referred to, concerning changes in transportation conditions and of the advances in the art; and it knew how great was their effect upon the actual values of railroad property. The value of the O'Fallon Railway not having been finally ascertained under § 19a, it was obliged by paragraph 4 to utilize "the results of its investigation under § 19a of this act in so far as deemed by it available." The evidence introduced in the recapture proceedings showed, among other things, that of the five locomotives in the O'Fallon's service, December 31, 1920, one had been built as early as 1874, and that their

⁹³ "Costs of railroad building, owing to improvements in methods and economies thereby effected, did not vary greatly during the period of twenty years preceding 1914, although the prices of labor and material fluctuated. There is no testimony here as to how much it cost to build any railroad or any substantial part of one in any of the recapture periods, and for that reason it is impossible to make a comparison of such costs in the two periods. It is not safe to assume, as the O'Fallon has assumed, that costs of building railroads have varied in recent years in direct ratio to the variation in costs of commodities in general use, or in the costs of materials or labor generally. The fallacy of basing reproduction cost upon price curves or ratios is clearly indicated by the tabulations introduced by the carrier." (p. 41 of 124 Inters. Com. Rep.)

⁹⁴ The Commission says (p. 40 of 124 Inters. Com. Rep.): "Weighing the figures previously mentioned in the light of these considerations and the entire record, and viewing the carrier as a common carrier in successful operation and with an established business, we conclude that the value for rate-making purposes of the entire common carrier property of the O'Fallon on June 30, 1919, was \$850,500."

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average age was 20.8 years; also that the aggregate outlays for additions and betterments in the railroad, less small retirements, had in eleven years been only \$98,148.25. The O'Fallon did not introduce any evidence bearing upon functional depreciation of the property. The Commission may reasonably have concluded that, even if there had been introduced persuasive evidence that the cost, during the recapture periods, of reproducing new the identical plant approximated the rise in the general price level, still the actual value of the O'Fallon Railway, as it existed June 30, 1914, had not increased, because the functional depreciation plus the physical depreciation since that date counterbalanced fully what otherwise might have been the higher value of the plant.

The O'Fallon urged that its large net earnings during the recapture periods and earlier fully established a higher value, independently of the evidence of reproduction cost. This contention ignores the peculiar character of the property. The railroad, which is owned by the Adolphus Busch estate and family and lies wholly in Illinois, operates about 9 miles of main line from two coal mines also owned by the Busch estate and family, to the tracks of the Terminal Company in East St. Louis. There are 12 miles of yardage tracks, located largely at the Busch mines. While the railroad is legally a common carrier, it is actually an industrial railroad. Ninety-nine per cent of its revenues are derived directly from the carriage of coal; and of the remaining one per cent, about half appears to come from a payment of \$300 a month made by the Busch coal company for carrying its miners to and from its mines. Besides the coal from the Busch mines there is a substantial, but diminishing amount carried under a long time contract, from two mines located on an electric road, the East St. Louis and Suburban Railway, which crosses the O'Fallon. This coal it carries from the junction to East St. Louis. See *St. Louis & O'Fallon R. Co. v. East St. Louis & S. R. Co.* 81 Inters. Com. Rep. 538. Obviously the value of this railroad property is wholly dependent upon the operation of the mines.

How long the four mines will continue to be operated was and still is entirely uncertain. Their product is subject to the competition of 221 other bituminous coal mines in Illinois. These, P.U.R.1929C.

which are all located on other railroads, enjoy low rates to St. Louis. See *Perry Coal Co. v. Alton & S. R. Co.* 5 Illinois Commerce Commission, 461. The vicissitudes of coal mining, the diminishing use of coal since the war because of increased fuel efficiency, the competition of oil as fuel, and the growing use of hydroelectric power are matters of common knowledge; as are the diminishing operations during recent years of the Illinois coal mines as compared with the mines in nonunion territory.⁹³ Moreover, the decline in the volume of traffic, the reduction in coal rates made by Reduced Rates, 1922, 68 Inters. Com. Rep. 676, and the growing expenses of the carrier due to increased payroll, were put in evidence by it. In view of these facts, the Commission was clearly justified in refusing to find that the railroad had a higher value than in 1914, although the net earning as reported showed a return for the earlier period averaging $7\frac{1}{2}$ per cent upon the amount claimed as reproduction cost.

This Court has no concern with the correctness of the Commission's reasoning on the evidence in making its findings of fact, since it applied the rules of substantive law prescribed by Congress and reached its findings of actual value by the exercise of its judgment upon all the evidence, including enhanced construction costs. *Virginian R. Co. v. United States*, 272 U. S. 658, 665, 666, 71 L. ed. 463, 47 Sup. Ct. Rep. 222. *Assigned Car Cases*, 274 U. S. 564, 580, 71 L. ed. 1204, 47 Sup. Ct. Rep. 727. We must bear in mind that here we are not dealing with a question of confiscation; that we are dealing, as was pointed out in *Smyth v. Ames*, 169 U. S. 466, 527, 42 L. ed. 819, 18 Sup. Ct. Rep. 418, with a legislative question which can "be more easily determined by a Commission composed of persons whose special skill, observation and experience qualifies them to so handle great problems of transportation as to do justice both to the public and to those whose money has been used to construct and maintain highways for the convenience and benefit of the people."

Mr. Justice Holmes and Mr. Justice Stone join in this opinion.

⁹³ See Geological Survey: "Coal in 1923," pp. 523-535; Bureau of Mines: "Coal in 1924," p. 460; "Coal in 1925," pp. 394-398; "Coal in 1926," pp. 420-431, 443-461.
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